MALCOLM PIRNIE

USEPA Brownfields Assessment Demonstration Pilot Project

PHASE II ENVIRONMENTAL SITE ASSESMENT

HENRY JOHNSON BOULEVARD PROPERTIES ALBANY, NEW YORK

City of Albany
Albany Community Development Agency
Albany, New York

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43 British American Boulevard
Latham, New York 12110

January 2005
4279001

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1.0 INTRODUCTION

The City of Albany, New York (City) has received a grant under the United States Environmental Protection Agency's (USEPA) Brownfields Assessment Demonstration Pilot Program to support economic development in the City through the identification, assessment, cleanup, and redevelopment of Brownfields properties. This Phase II Environmental Site Assessment (ESA) summarizes the results of a site investigation for properties located along Henry Johnson Boulevard in Albany, New York that was conducted using grant funding. The objective of the ESA was to provide an assessment of environmental conditions at the site.

This Phase II ESA will be submitted to the USEPA and the New York State Department of Environmental Conservation (NYSDEC) for regulatory review. A Phase I ESA for the Henry Johnson Boulevard Properties was previously submitted to these agencies in May 2003 (Malcolm Pirnie, 2003).

N

HENRY JOHNSON BOULEVARD

1ST STREET

2ND STREET

CLINTON AVENUE

150 HJB

216 2ND ST.

214 2ND ST.

212 2ND ST.

210 2ND ST.

148 HJB

ALLEY

146 HJB

138 HJB

132 HJB

130 HJB

128 HJB

126 HJB

124 HJB

339 CLINTON AVE.

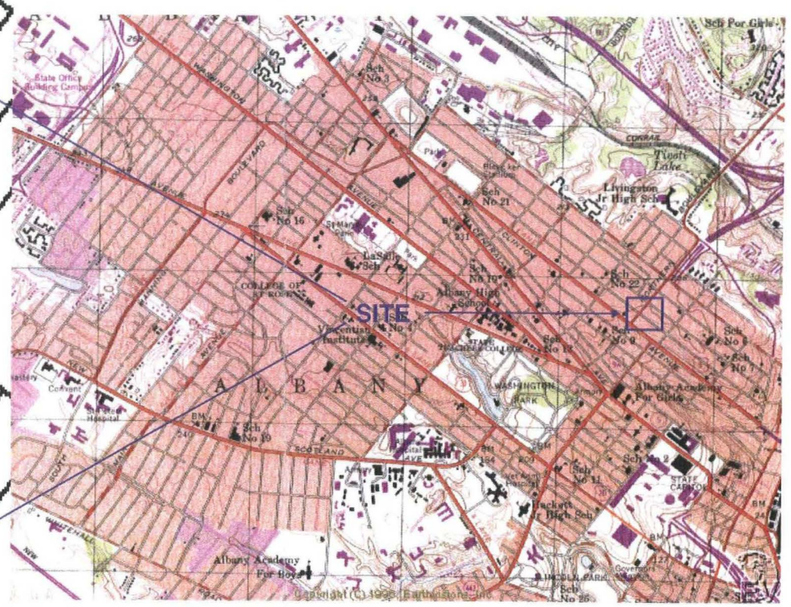
337 CLINTON AVE.

335 CLINTON AVE.

333 CLINTON AVE.

LEGEND

HENRY JOHNSON BOULEVARD
ASSESSMENT PROPERTIES



APPROXIMATE SCALE IN FEET

0 30 60 120

F:\PROJECT\4279001\FILE\HENRYJOHNSONBLVD\PHASE\FIGURES.PPT

MALCOLM PIRNIE	**PHASE II ESA** **HENRY JOHNSON BOULEVARD** **ALBANY, NEW YORK**	**HENRY JOHNSON BOULEVARD** **SITE LOCATION**	MALCOLM PIRNIE, INC. December 2004 FIGURE 2-1

the site. Sands are described as well sorted and stratified with a thickness of between approximately seven and 65 feet.

The Soil Survey of Albany County, New York, produced and distributed by the United States Department of Agriculture, Soil Conservation Service, identified soils at the site as urban lands with some areas of clayey and loamy udorthents complexes (USDA-SCS, 1992). Urban lands are identified by being greater than 85 percent covered by roads, parking lots, buildings and other generally impervious surfaces. Additionally, urban lands are drained by man made improvements; therefore natural soil structure is likely disturbed by human activity. Udorthents are generally brown silt loam from the surface to approximately five inches below ground surface and silty loam or silty clay with greater than 40 percent rock fragments to as deep as 60 inches. Since this complex is classified along with urban lands, variations and deviations resulting from human activity are likely.

Topography at the site varies from approximately 200 feet above mean sea level (amsl) at the northeastern end of the site to approximately 180 feet amsl at the southwestern end of the site. Groundwater levels measured during the site investigation and the corresponding groundwater elevations are summarized in Table 2-1. As shown in Table 2-1, the depth to groundwater at the site generally ranged from four to seven feet below ground surface (bgs). A potentiometric contour map is presented on Figure 2-2. As shown on Figure 2-2, the direction of groundwater flow generally follows the topographic gradient of the site toward the west and southwest.

2.3 SITE HISTORY

Historical records for the site indicate that it was developed prior to 1892 and the buildings and improvements along Henry Johnson Boulevard have gone through modifications that required demolition. The properties have historically been residential or commercial.

The four properties that front Clinton Avenue have apparently remained unchanged or new buildings were built in the footprints of previous buildings. The location of buildings at 124, 126, 128, and 130 Henry Johnson Boulevard appeared to be relatively consistent through 1995; however no buildings were present on these properties at the time of the

2.0 SITE DESCRIPTION AND BACKGROUND

2.1 SITE LOCATION AND DESCRIPTION

The site includes 17 properties located along Henry Johnson Boulevard, in the City of Albany, New York. Figure 2-1 identifies the site and the locations of the properties included in the assessment. The assessment area extends for two blocks along the southeastern side of Henry Johnson Boulevard, between Clinton Avenue to the south and Second Street to the north. Four properties front on Clinton Avenue; four properties front on Second Street; and nine properties front on Henry Johnson Boulevard.

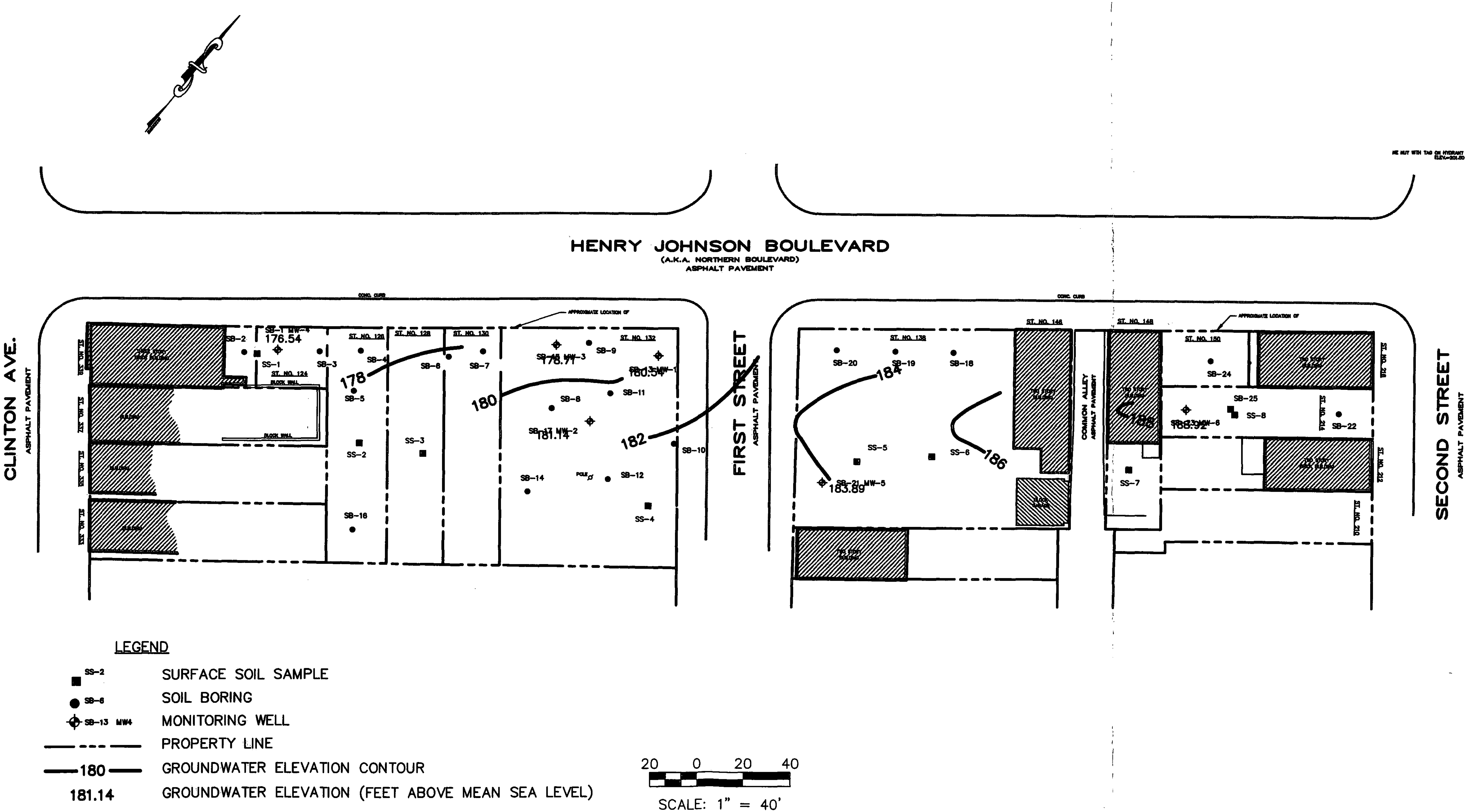
The site use is mixed and includes active and inactive commercial and residential properties. Nine of the assessment properties are currently vacant. Buildings are present on eight properties. Three of the buildings are vacant residential/commercial, two buildings are residences, and three buildings were residential and commercial.

Generally, buildings on the assessed properties are two or three stories. Very little ground surface is exposed at these properties. A concrete sidewalk is located between the front of the buildings and the adjacent street. The buildings extended laterally to their respective property lines. A small portion of ground surface is exposed at the rear of a majority of the properties with structures. The buildings are constructed of wood or brick and most contain substructures (i.e., basements).

2.2 GEOLOGY/HYDROGEOLOGY

Since bedrock was not encountered during the site investigation, the Hudson-Mohawk Sheet of the Geologic Map of New York was reviewed to determine the underlying bedrock at the site (Fisher et al., 1970). Normanskill Shale, with minor mudstone and sandstone is present beneath the site and a majority of the surrounding area.

The Hudson-Mohawk Sheet of the Surficial Geologic Map of New York was used to identify characteristics of the surface geology at the site (Caldwell et al., 1987). Lacustrine sand deposits associated with large bodies of water were identified in the area underlying



MALCOLM PIRNIE

HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

POTENTIOMETRIC CONTOURS

FIGURE 2–2

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User: MAHONEY Spec: PIRNIE STANDARD File: I:\ACAD\PROJ\4279\001\FIG 2-2.DWG Scale: 1:1 Date: 02/04/2005 Time: 15:48 Layout: Layout1

TABLE 2-1
SUMMARY OF GROUNDWATER ELEVATION DATA
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Well ID	Top of Casing (feet)	Depth to Groundwater (feet) 8/4/2004	Groundwater Elevation (feet)
MW-1	187.55	7.01	180.54
MW-2*	186.62	5.48	181.14
MW-3	186.17	7.46	178.71
MW-4	181.51	4.97	176.54
MW-5	188.13	4.24	183.89
MW-6	195.46	6.54	188.92

Elevations based on NGVD 1929 datum.
* Top of casing elevation estimated based on ground surface elevation

investigation. The properties at 132, 134, and 136 Henry Johnson Boulevard were vacant at the time of the investigation. Historically, four separate commercial and residential buildings were on these properties, adjacent to Henry Johnson Boulevard (historically Northern Boulevard) as late as 1908. By 1934 these buildings had been demolished and a single building was located in the center of the combined properties. This facility was identified as a service station. The service station building was listed on the property as late as 1995 but was not present at the time of the investigation.

Four buildings occupied the properties at 138, 140, 142, and 144 Henry Johnson Boulevard. The location of buildings on these properties was consistent until their demolition, which occurred between 1950 and 1989.

The building at 148 Henry Johnson Boulevard was formerly used as a laundry and tailor shop, and potentially a dry cleaner. The interior of the building was inspected in March 2003 and no evidence of dry cleaning materials or machinery was observed.

3.0 SITE INVESTIGATION

The site investigation was conducted in accordance with the USEPA–approved Work Plan dated February 2004 (Malcolm Pirnie, Inc., 2004). The site investigation included site surveying, magnetic survey, surface soil sampling and analysis, soil borings, subsurface soil sampling and analysis, and groundwater sampling and analysis. A New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) and NYSDEC Analytical Services Protocol (ASP)-approved analytical laboratory analyzed all samples collected during the investigation. ASP Category B data packages were produced for each sample. A Data Validation Report was prepared to ensure that the quality of the data was sufficient to evaluate remedial alternatives.

3.1 SITE SURVEY

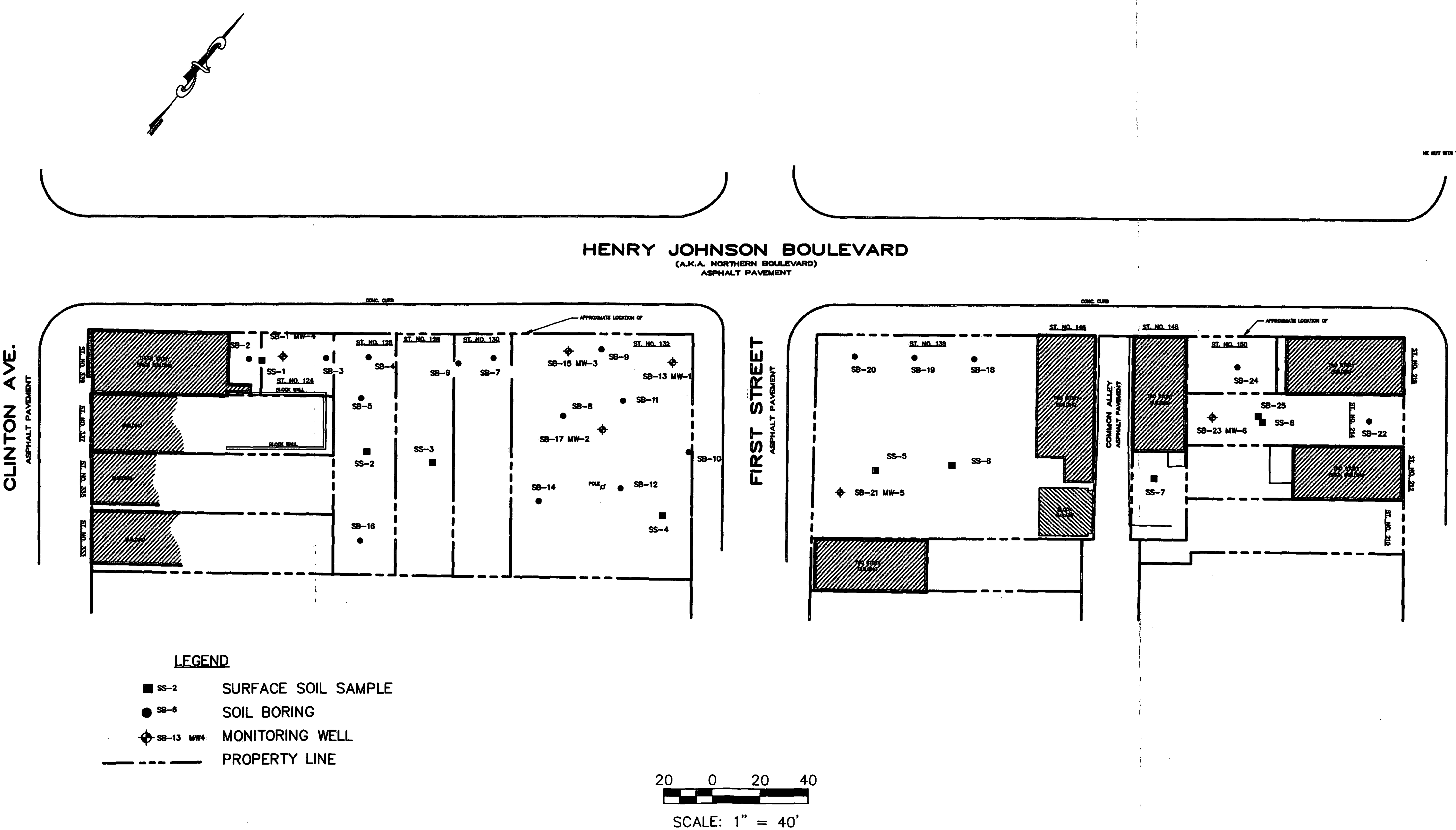
A survey was conducted at the site to create a base map, and to identify the locations of sampling and investigation activities relative to site features. The survey included:

- Relevant features of the site (i.e., buildings, streets, utilities);
- Sampling locations
- Elevation of groundwater monitoring wells.

The survey report included Northing and Easting coordinates to the nearest 0.1 feet in reference to a relative coordinate system, and elevation to the nearest 0.01 feet in reference to the National Geodetic Vertical Datum (NGVD) of 1929.

3.2 MAGNETIC SURVEY

Malcolm Pirnie, Inc. (Malcolm Pirnie) conducted a surface survey for metal debris and infrastructure on the accessible portions of the site using a Schonstadt® magnetic and dual frequency pipe and cable locator to identify buried metal infrastructure associated with historic buildings or former operations at the site. No significant buried metal objects were located at the site.


HENRY JOHNSON BOULEVARD
(A.K.A. NORTHERN BOULEVARD)
ASPHALT PAVEMENT
CONC. CURB
CLINTON AVE.
ASPHALT PAVEMENT
FIRST STREET
ASPHALT PAVEMENT
COMMON ALLEY
ASPHALT PAVEMENT
SECOND STREET
ASPHALT PAVEMENT
APPROXIMATE LOCATION OF
ST. NO. 124
ST. NO. 126
ST. NO. 128
ST. NO. 130
ST. NO. 132
ST. NO. 138
ST. NO. 146
ST. NO. 148
ST. NO. 150
ST. NO. 218
ST. NO. 214
ST. NO. 212
ST. NO. 210
BLOCK WALL
SB-1 MW-4
SB-2
SS-1
SB-3
SB-4
SB-5
SS-2
SS-3
SB-6
SB-7
SB-15 MW-3
SB-9
SB-13 MW-1
SB-8
SB-11
SB-17 MW-2
SB-10
SB-14
POLE
SB-12
SS-4
SB-16
SB-20
SB-19
SB-18
SS-5
SS-6
SB-21 MW-5
SB-24
SB-25
SB-23 MW-6
SS-8
SB-22
SS-7
LEGEND
SS-2 SURFACE SOIL SAMPLE
SB-6 SOIL BORING
SB-13 MW4 MONITORING WELL
PROPERTY LINE
20 0 20 40
SCALE: 1" = 40'

XREFS: I:\ACAD\PROJ\4279\XREF\TOPO-HJ.dwg IMAGES: None
User: fuller Spec: PIRNIE STANDARD? File: I:\ACAD\PROJ\4279\001\FIG 3-1.DWG Scale: 1:1 Date: 02/04/2005 Time: 10:37 Layout: Layout1

MALCOLM PIRNIE

HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

SAMPLING LOCATIONS

FIGURE 3-1

3.3 SURFACE SOIL SAMPLING

Surface soil samples were collected from areas of former development, or adjacent to areas of long-term development, where accessible. The surface soil sampling locations are shown on Figure 3-1. Samples were collected from a depth not exceeding two inches below ground surface.

Sampling and sample handling procedures were conducted in accordance with the Work Plan. The surface soil samples were analyzed for semi-volatile organic compounds (SVOCs) and Resource Conservation and Recovery Act (RCRA)-listed metals. Descriptions of the sampled soil and observations of the ground surface were recorded during sampling.

3.4 SUBSURFACE SOIL SAMPLING

A total of 25 soil borings were drilled to allow for the collection of subsurface soil samples. The soil boring locations are shown on Figure 3-1. All subsurface soil boring and sample collection and handling activities were conducted in accordance with the Work Plan.

3.4.1 Soil Borings

Soil borings were advanced using a direct-push drilling rig (i.e., Geoprobe®). Continuous soil cores (MacroCore) were collected from ground surface to the total depth of each boring. Upon collection, the core was screened over two-foot intervals for volatile organic compounds (VOCs) using a photoionization detector (PID) and visually inspected for signs of contaminants. The soil in the core was then classified by the on-site geologist. The soil boring logs are presented as Appendix A. The depth of each boring was dependent on site-specific conditions as described below.

3.4.2 Soil Sample Collection

3.4.2.1 Fill Material Samples

Nine soil borings were placed in areas that may have historically received fill material. These borings were drilled to evaluate the depth and composition of fill material

at the site. At a minimum, samples from these borings were collected from the zero to two foot bgs, and two to four foot bgs depth intervals. Additional deeper samples were collected if PID readings or field observations indicated the potential presence of contamination. The samples were analyzed for VOCs, SVOCs, and RCRA metals. Fill material borings were drilled until native soil was encountered, or no further indications of contamination were present.

3.4.2.2 Area of Concern and Site Boundary Samples

Nine soil borings were drilled from ground surface to a minimum of five feet below the groundwater table to evaluate areas of concern and subsurface conditions at site boundaries. The depth to groundwater at the site was generally between six and eight feet bgs. One soil sample was collected from each of these borings and analyzed for VOCs, SVOCs, and RCRA metals. The soil interval with the highest PID measurement and/or the greatest indication of contamination was retained for laboratory analysis. If no indications of contamination were observed during field screening, then the soil interval immediately above the water table was retained for laboratory analysis.

3.5 GROUNDWATER SAMPLING

Groundwater samples were collected from monitoring wells installed in six of the soil borings discussed in Section 3.4.2.2. Monitoring well installation, development, and groundwater sampling were conducted in accordance with the Work Plan.

3.5.1 Monitoring Well Installation

One-inch diameter PVC monitoring wells were installed in the 3-¼-inch Geoprobe® boreholes. Each well was positioned so that the screen intercepted the water table and was constructed using Geoprobe® Prepacked Well Screens. The prepacked well screens are constructed of one-inch diameter 0.010 inch slotted PVC screen surrounded by 20/40 mesh sand. A stainless steel screen contains the sand. The outside diameter of the filter pack is 2.5 inches. A minimum of two feet of bentonite chips was placed above the screened

interval. The remainder of the boring was backfilled with cement-bentonite grout. Each boring was completed with a steel flush mount well cover and locking well cap.

3.5.2 Monitoring Well Development

Monitoring wells were developed upon completion to minimize turbidity in groundwater samples collected from each well and to improve their hydraulic properties. Development water generated was discharged on the ground surface adjacent to each well in accordance with NYSDEC guidelines. Purged groundwater was temporarily contained in pre-cleaned five-gallon buckets prior to discharge to evaluate whether sheens and/or non-aqueous phase liquids (NAPLs) were present in the purge water.

3.5.3 Groundwater Sampling

Groundwater samples were collected from each of the six monitoring wells approximately one week after well development was completed. Prior to groundwater purging and sampling, the water level in each monitoring well was measured and recorded. Groundwater sampling was conducted in accordance with the USEPA Low-Flow Low-Purge Sampling Protocol (USEPA, 1998). To the extent practicable, groundwater purging rates were low enough to prevent significant drawdown of the groundwater level in the well; however, measurement of water levels during purging was not possible due to the narrow diameter of the monitoring wells. Each groundwater sample was analyzed for VOCs, SVOCs, and RCRA-listed metals. To evaluate geochemical characteristics of the groundwater, and to evaluate the effectiveness of well purging, temperature, pH, oxidation-reduction potential, specific conductivity, turbidity, and dissolved oxygen were measured during purging and immediately prior to groundwater sampling. If the turbidity of the purged groundwater was greater than 50 Nephelometric Turbidity Units (NTUs) at the time of sampling, both filtered and unfiltered samples were collected and analyzed for RCRA-listed metals. Filtered samples were filtered in the field using a 0.45 micron filter and vacuum pump apparatus.

4.0 DATA VALIDATION

4.1 DATA VALIDATION

In accordance with the Work Plan, data validation was performed for the samples collected during the Phase II ESA. The data validation report is contained in Appendix B. Sample processing was generally conducted in compliance with the analytical protocol requirements and quality criteria. All data were classified as usable with some minor qualification, with the following exceptions:

- Results for three SVOCs in one sample were not usable due to inaccurate identification of the Tentatively Identified Compounds (TICs).
- Results for VOCs in two samples were revised due to reporting errors.

4.1.1 VOCs

Sample holding times, surrogate recoveries, internal standard responses, and instrument tune performance were generally compliant with the analytical protocol requirements. Due to low internal and surrogate standard responses, VOC results for several samples were qualified as estimated ("J"). Due to poor spectral quality, the detection of isopropylbenzene in sample HJ-SB-24 (6-7) was qualified as tentative in identification and estimated in value ("NJ"). Accuracy and precision values for the matrix spike/matrix spike duplicate evaluations were generally within the recommended ranges. Further detail regarding the validation is included in the data validation report.

4.1.2 SVOCs

Sample holding times, surrogate recoveries, internal standard responses, and instrument tune performance were generally compliant with the analytical protocol requirements. Due to low level detection in the associated method blank, detections of bis(2-ethylhexyl)-phthalate reported in several samples were edited to nondetection ("U") at the reporting limit. Calibration standards met the validation guidelines, with the exceptions noted in the data validation report. Results outlying the validation guidelines

spike/matrix spike duplicate evaluations were generally within the recommended ranges. Further detail regarding the validation is included in the data validation report.

4.1.3 Metals

Sample holding times, surrogate recoveries, and internal standard responses were generally compliant with the analytical protocol requirements. Total and filtered fraction values correlated well. Several sample results were qualified as estimated in accordance with the discussions presented in the data validation report.

5.0 NATURE AND EXTENT OF CONTAMINANTS

5.1 FIELD OBSERVATIONS

The ground surface over the majority of the site was composed of sparse vegetation and asphalt paved areas and was generally free of debris (such as glass, metal, or wood). As shown in the soil boring logs, overburden materials observed in the soil cores were generally composed of fill material overlying medium to fine sand and silt. In most areas, silty clay was present beneath the fine sand and silt. Bedrock was not encountered during the site investigation.

A solvent-like odor and stained soil was noted in samples from soil boring SB-01, which was located inside the boundaries of a former building foundation in the southwestern portion of the site (124 Henry Johnson Boulevard(HJB)) (Figure 3-1). PID measurements of greater than 9,999 parts per million (ppm) were noted at approximately 9.5 feet bgs in samples from soil boring SB-01. Groundwater collected from monitoring well MW-04 (installed in soil boring SB-01) exhibited indications of contamination, including a strong solvent odor and a noticeable sheen. Several borings in the area of a former vehicle maintenance and refueling station property located at the corner of First Street and HJB (132 HJB) (Figure 3-1), exhibited visual and olfactory evidence of petroleum related compounds. Soil borings in this area that showed evidence of petroleum related compounds were as follows:

- SB-08,
- SB-09,
- SB-10,
- SB-11,
- SB-12,
- SB-15, and
- SB-17.

PID measurements of 2,280 ppm were noted at approximately 8.5 feet bgs in samples collected from boring SB-09, located in the vicinity of the northern property boundary. PID measurements ranging from 0.5 ppm to 581 ppm were noted in other soil samples collected from the former vehicle maintenance and refueling area. Groundwater samples collected

from this area (MW-01, MW-02, and MW-03) generally did not exhibit any evidence of petroleum related compounds. Samples collected from soil boring SB-24, which is located in the vicinity of a suspected former fuel oil tank, showed visual and olfactory evidence of petroleum related compounds. The PID measurement in samples collected from SB-24 was 99 ppm at approximately 7.5 feet bgs. No evidence of petroleum related compounds was observed in the groundwater collected from monitoring well MW-06, which is located in the vicinity of soil boring SB-24. No evidence of solvents or petroleum related compounds was observed in any other soil borings during the investigation.

5.2 LABORATORY RESULTS

Laboratory results for soil and groundwater samples collected during the investigation are summarized in Tables 5-1 and 5-2 (soil samples) and Tables 5-3 and 5-4 (groundwater samples). A summary of analytical results is provided on Figures 5-1 through 5-3 for soil, and Figure 5-4 for groundwater. Analytical laboratory reporting forms (Form I) for samples collected for the Phase II ESA are provided in Appendix C.

5.2.1 Soil

Tables 5-1 and 5-2 summarize the analytical results for soil samples collected at the site during the Phase II ESA. The applicable NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 soil cleanup objectives are also listed in Tables 5-1 and 5-2 for comparison. The analytical results are also summarized on Figure 5-1 (VOCs and SVOCS), Figure 5-2 (mercury), and Figure 5-3 (lead).

5.2.1.1 VOCs

As shown in Table 5-1, soil sample SB-01 (8-9) contained tetrachloroethene (PCE) at a concentration of 52,000,000 micrograms per kilogram (ug/kg), which exceeded the corresponding NYSDEC TAGM 4046 cleanup objective of 1,400 ug/kg. PCE was also detected in sample SB-04 (0-2) at a concentration of 1,600 ug/kg, which also exceeded the corresponding NYSDEC TAGM 4046 Cleanup Objective. Soil sample SB-12 (11-12) contained several VOCs at concentrations greater than the corresponding NYSDEC

HE NUT WITH TAG ON HYDRANT
ELEV.=201.50

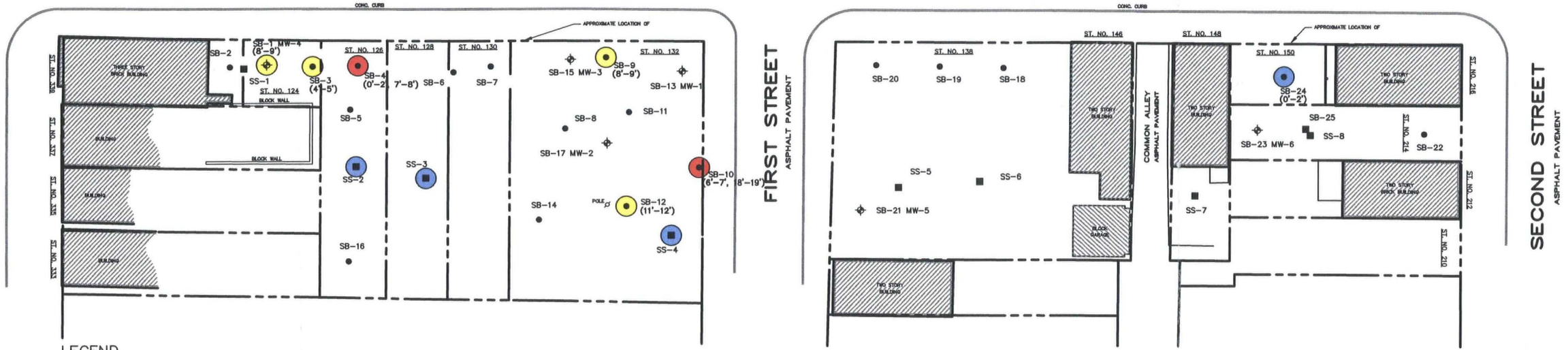
HENRY JOHNSON BOULEVARD

(A.K.A. NORTHERN BOULEVARD)
ASPHALT PAVEMENT

CLINTON AVE.
ASPHALT PAVEMENT

FIRST STREET
ASPHALT PAVEMENT

SECOND STREET
ASPHALT PAVEMENT



LEGEND

■ SS-2	SURFACE SOIL SAMPLE
● SB-6	SOIL BORING
⊕ SB-13 MW4	MONITORING WELL
— — —	PROPERTY LINE
◉ SB-3	SAMPLE CONTAINED VOCS AT CONCENTRATIONS THAT EXCEEDED THE CORRESPONDING NYSDEC TAGM 4046 CLEAN UP OBJECTIVES
◉ SB-24	SAMPLE CONTAINED SVOCS AT CONCENTRATIONS THAT EXCEEDED THE CORRESPONDING NYSDEC TAGM 4046 CLEAN UP OBJECTIVES
◉ SB-4	SAMPLE CONTAINED VOCS & SVOCS AT CONCENTRATIONS THAT EXCEEDED THE CORRESPONDING NYSDEC TAGM 4046 CLEAN UP OBJECTIVES
(0'-2')	SOIL SAMPLE DEPTH

20 0 20 40

SCALE: 1" = 40'

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HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

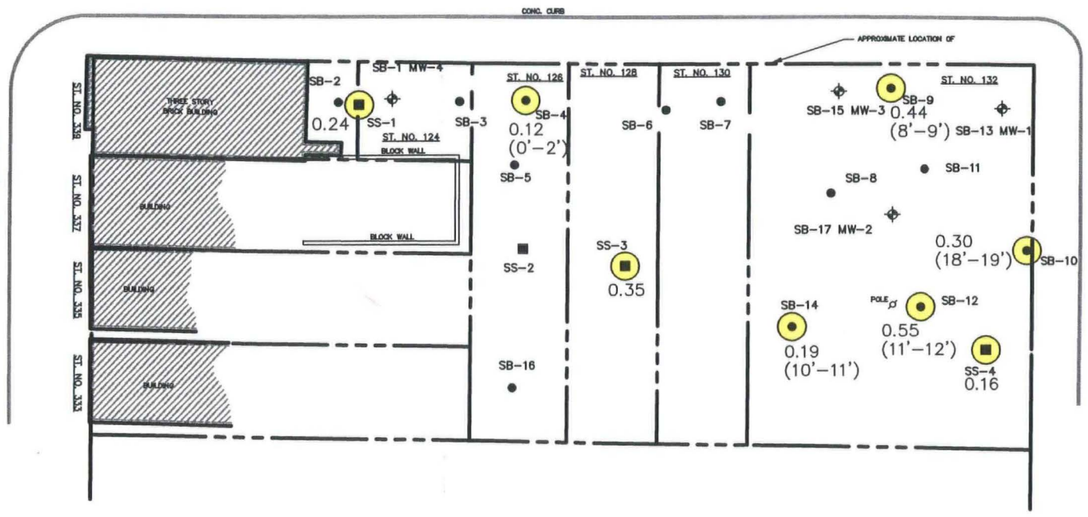
SUMMARY OF SOIL SAMPLING (VOCS & SVOCS)

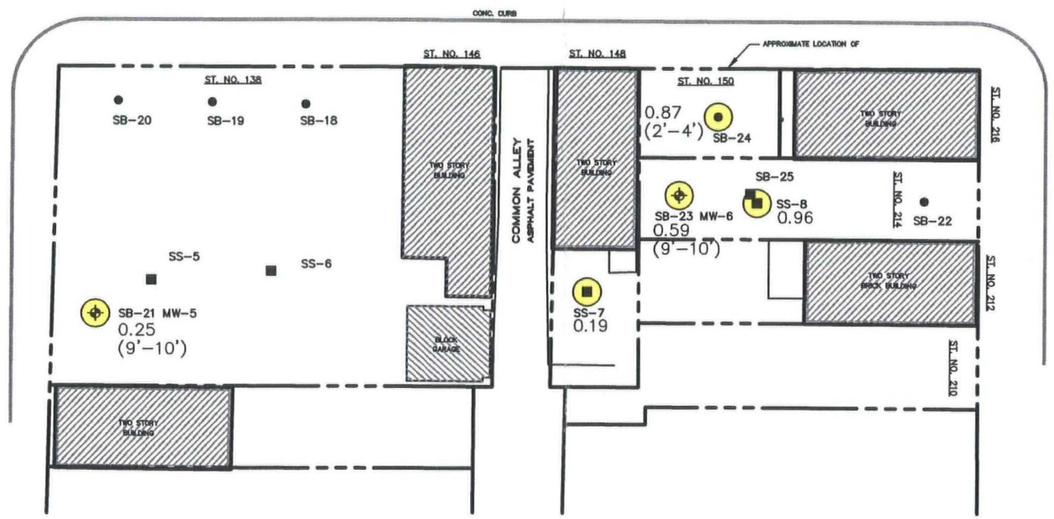
FIGURE 5-1

NE NUT WITH TAG ON HYDRANT
ELEV.=201.50

HENRY JOHNSON BOULEVARD

(A.K.A. NORTHERN BOULEVARD)
ASPHALT PAVEMENT





LEGEND

- ■ SS-2 — SURFACE SOIL SAMPLE
- ● SB-6 — SOIL BORING
- ⌖ SB-13 MW4 — MONITORING WELL
- PROPERTY LINE
- ◉ SB-4 — SAMPLE CONTAINED MERCURY AT CONCENTRATIONS GREATER THAN NYSDEC TAGM 4046 CLEANUP OBJECTIVE.
- 0.35 — MERCURY CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (mg/Kg)
- (2'-4') — SOIL SAMPLE DEPTH

20 0 20 40

SCALE: 1" = 40'

MALCOLM PIRNIE

HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

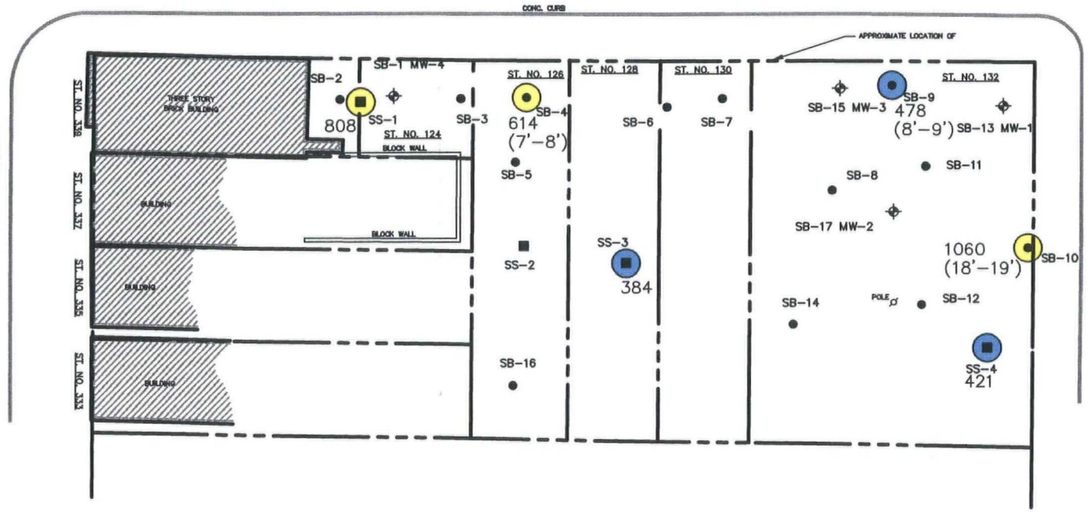
SUMMARY OF SOIL SAMPLING (MERCURY)

FIGURE 5-2

NE NUT WITH TAB ON HYDRANT
ELEV.=201.50

HENRY JOHNSON BOULEVARD

(A.K.A. NORTHERN BOULEVARD)
ASPHALT PAVEMENT



LEGEND

■ SS-2	SURFACE SOIL SAMPLE
● SB-6	SOIL BORING
⊕ SB-13 MW4	MONITORING WELL
— — —	PROPERTY LINE
◉ SB-9	LEAD CONCENTRATIONS GREATER THAN 100 mg/Kg, BUT LESS THAN 500 mg/Kg
◉ SB-4	LEAD CONCENTRATIONS GREATER 500 mg/Kg
808	LEAD CONCENTRATIONS IN MILLIGRAMS PER KILOGRAM (mg/Kg)
(2'-4')	SOIL SAMPLE DEPTH

20 0 20 40

SCALE: 1" = 40'

MALCOLM PIRNIE

HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

SUMMARY OF SOIL SAMPLING (LEAD)

FIGURE 5-3

HE NUT WITH TAG ON HYDRANT
ELEV.=201.50

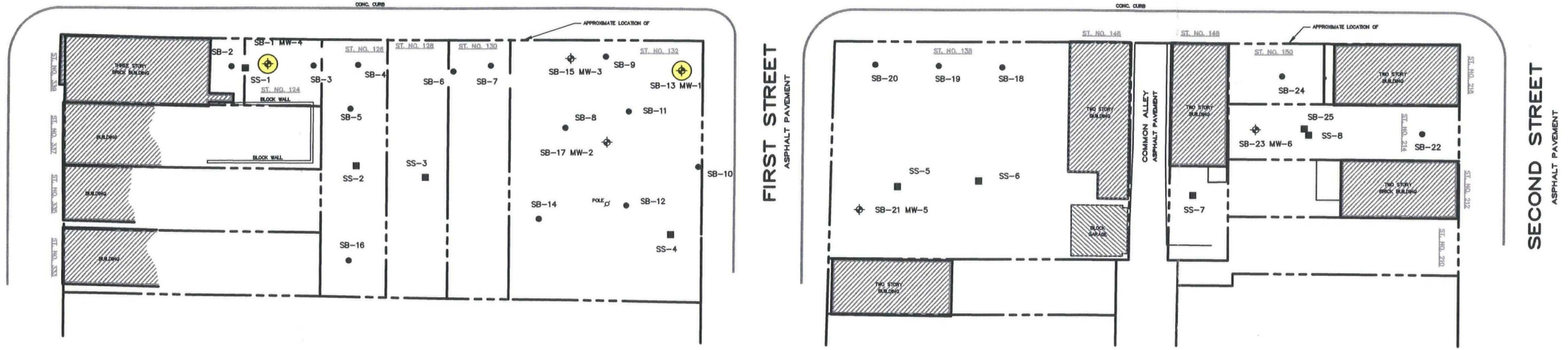
HENRY JOHNSON BOULEVARD

(A.K.A. NORTHERN BOULEVARD)
ASPHALT PAVEMENT

CLINTON AVE.
ASPHALT PAVEMENT

FIRST STREET
ASPHALT PAVEMENT

SECOND STREET
ASPHALT PAVEMENT



LEGEND

- ■ SS-2 — SURFACE SOIL SAMPLE
- ● SB-6 — SOIL BORING
- ⌖ SB-13 MW4 — MONITORING WELL
- PROPERTY LINE
- ⌖ MW-1 — SAMPLE CONTAINED VOCs AT CONCENTRATIONS GREATER THAN NYSDEC CLASS GA STANDARDS.

20 0 20 40

SCALE: 1" = 40'

MALCOLM PIRNIE

HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

SUMMARY OF GROUND WATER SAMPLING (VOCs)

FIGURE 5-4

TABLE 5-1
SUMMARY OF SOIL SAMPLING RESULTS (VOCs and SVOCs)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID	NYSDEC	HJ-SB-01	HJ-SB-02	HJ-SB-03	HJ-SB-04	HJ-SB-04	HJ-SB-06
Sample Depth (feet)	TAGM 4046	8-9	3-4	4-5	0-2	7-8	0-2
Sampling Date	Soil Cleanup	07/13/04	07/13/04	07/13/04	07/13/04	07/13/04	07/13/04
Matrix	Objective	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
VOCs							
Acetone	200	2800000 UD	100 U	52 U	440 U	52 U	39 U
Benzene	60	200000 UD	2.8 U	1.4 U	32 U	1.4 U	1.1 U
Carbon Disulfide	2700	330000 UD	1.4 U	0.7 U	52 U	0.7 U	0.53 U
Cyclohexane		310000 UD	4.2 U	2.1 U	49 U	2.1 U	1.6 U
Ethyl Benzene	5500	340000 UD	3.4 U	1.7 U	55 U	1.7 U	1.3 U
Isopropylbenzene	2300	280000 UD	5.1 U	2.6 U	45 U	2.6 U	1.9 U
m/p-Xylenes	1200	810000 UD	7 U	3.6 U	130 U	3.6 U	2.7 U
Methyl Acetate		700000 UD	17 U	8.9 U	1200	8.9 U	6.6 U
Methyl tert-butyl Ether	120	490000 UD	4.9 U	2.5 U	78 U	2.5 U	1.8 U
Methylene Chloride	100	2500000 JD	9.3 U	150	84 U	60	91
o-Xylene	600	310000 UD	5.9 U	3 U	49 U	3 U	2.2 U
Tetrachloroethene	1400	52000000 D	810	160	1600	150	160
Toluene	1500	330000 UD	3.5 U	21 J	52 U	27 J	1.3 U
trans-1,2-Dichloroethene	300	430000 UD	5.1 U	2.6 U	69 U	2.6 U	1.9 U
Trichloroethene	700	570000 UD	4.4 U	2.2 U	90 U	2.2 U	1.7 U
Trichlorofluoromethane		490000 UD	34 U	17 U	77 U	17 U	13 U
Vinyl Chloride	200	230000 UD	3.2 U	1.6 U	36 U	1.6 U	1.2 U
Total Confident Conc. VOC	10000	54500000	810	331	2800	237	251
Total TICs		0	0	0	0	0	0
SVOCs							
2,4-Dimethylphenol		24 U	NR	NR	190 U	540	18 U
2-Methylnaphthalene	36400	7.6 U	NR	NR	61 U	7.8 U	5.9 U
3+4-Methylphenols	900	20 U	NR	NR	160 U	97 J	16 U
Acetophenone		23 U	NR	NR	180 U	93 J	18 U
Anthracene	50000	11 U	NR	NR	84 U	11 U	8.2 U
Benzaldehyde		43 U	NR	NR	350 U	44 U	33 U
Benzo(a)anthracene	224	6.7 U	NR	NR	53 U	6.9 U	5.2 U
Benzo(a)pyrene	61	7.6 U	NR	NR	61 U	7.8 U	5.9 U
Benzo(b)fluoranthene	1100	23 U	NR	NR	190 U	24 U	18 U
Benzo(g,h,i)perylene	50000	19 U	NR	NR	150 U	20 U	15 U
Benzo(k)fluoranthene	1100	15 U	NR	NR	120 U	16 U	12 U
bis(2-Ethylhexyl)phthalate	50000	180 J	NR	NR	81 U	470	210 J
Butylbenzylphthalate	50000	120 J	NR	NR	120 U	880	11 U
Chrysene	400	14 U	NR	NR	110 U	46 J	11 U
Dimethylphthalate	2000	11 U	NR	NR	84 U	2500	8.2 U
Di-n-butylphthalate	8100	5.9 U	NR	NR	47 U	370 J	4.5 U
Fluoranthene	50000	57 J	NR	NR	49 U	79 J	4.8 U
Indeno(1,2,3-cd)pyrene	3200	11 U	NR	NR	85 U	11 U	8.3 U
Pentachlorophenol	1000	14 U	NR	NR	110 U	120 J	11 U
Phenanthrene	50000	9.8 U	NR	NR	79 U	50 J	7.6 U
Pyrene	50000	53 J	NR	NR	63 U	69 J	6.1 U
Total Confident Conc. SVOC	500000	410	NR	NR	0	5314	210
Total TICs		28890	NR	NR	1100	18740	1410

Notes

- Concentration exceeds corresponding NYSDEC TAGM Cleanup Objective

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample.

D - Sample diluted

NR - Not analyzed

* - Duplicate sample collected from HJ-SB-10 (6-7)

** - Duplicate sample collected from HJ-SB-19 (0-2)

TABLE 5-1
SUMMARY OF SOIL SAMPLING RESULTS (VOCs and SVOCs)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID	NYSDEC	HJ-SB-06	HJ-SB-08	HJ-SB-08	HJ-SB-09	HJ-SB-10	HJ-SX-02*	HJ-SB-10
Sample Depth (feet)	TAGM 4046	6-7	0-2	11-12	8-9	6-7	6-7	18-19
Sampling Date	Soil Cleanup	07/13/04	07/13/04	07/13/04	07/13/04	07/13/04	07/13/04	07/13/04
Matrix	Objective	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units	ug/kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
VOCs								
Acetone	200	48 U	40 U	47 U	5900 U	47	46	450
Benzene	60	1.3 U	1.1 U	1.3 U	430 U	0.2 U	0.24 U	100
Carbon Disulfide	2700	0.65 U	0.54 U	0.64 U	700 U	0.1 U	0.12 U	1.3 U
Cyclohexane		2 U	1.6 U	1.9 U	25000	0.3 U	0.36 U	3.9 U
Ethyl Benzene	5500	1.6 U	1.3 U	1.6 U	730 U	0.25 U	0.3 U	3.2 U
Isopropylbenzene	2300	2.4 U	2 U	2.3 U	5200 J	0.37 U	0.44 U	76
m/p-Xylenes	1200	3.3 U	2.7 U	3.3 U	1700 U	0.51 U	0.61 U	110
Methyl Acetate		8.2 U	6.8 U	8.1 U	1500 U	1.3 U	1.5 U	16 U
Methyl tert-butyl Ether	120	2.3 U	1.9 U	2.2 U	310000	0.36 U	0.42 U	110
Methylene Chloride	100	49	100	4.3 U	1100 U	34	11	160
o-Xylene	600	2.8 U	2.3 U	2.7 U	660 U	0.43 U	0.51 U	22 J
Tetrachloroethene	1400	64	200	4 U	590 U	13	130	63 J
Toluene	1500	1.7 U	1.4 U	1.6 U	690 U	0.26 U	0.31 U	3.3 U
trans-1,2-Dichloroethene	300	2.4 U	2 U	2.3 U	920 U	0.37 U	0.44 U	4.8 U
Trichloroethene	700	2.1 U	1.7 U	2 U	1200 U	0.32 U	0.38 U	4.1 U
Trichlorofluoromethane		16 U	13 U	16 U	1000 U	2.5 U	2.9 U	32 U
Vinyl Chloride	200	1.5 U	1.2 U	1.5 U	480 U	0.24 U	0.28 U	3 U
Total Confident Conc. VOC	10000	113	300	0	340200	94	187	1091
Total TICs		0	0	27200	1209000	0	0	4350
SVOCs								
2,4-Dimethylphenol		23 U	19 U	22 U	25 U	21 U	21 U	23 U
2-Methylnaphthalene	36400	7.2 U	6 U	7.1 U	790	6.8 U	6.7 U	7.3 U
3+4-Methylphenols	900	19 U	16 U	19 U	21 U	18 U	18 U	19 U
Acetophenone		22 U	18 U	22 U	24 U	21 U	20 U	22 U
Anthracene	50000	10 U	8.4 U	9.9 U	11 U	9.4 U	9.3 U	10 U
Benzaldehyde		41 U	34 U	41 U	46 U	38 U	38 U	41 U
Benzo(a)anthracene	224	6.3 U	5.3 U	6.3 U	7.1 U	5.9 U	100 J	6.4 U
Benzo(a)pyrene	61	7.2 U	6 U	7.1 U	8.1 U	6.8 U	62 J	7.3 U
Benzo(b)fluoranthene	1100	22 U	19 U	22 U	25 U	21 U	57 J	23 U
Benzo(g,h,i)perylene	50000	18 U	15 U	18 U	20 U	17 U	17 U	18 U
Benzo(k)fluoranthene	1100	14 U	12 U	14 U	16 U	13 U	48 J	14 U
bis(2-Ethylhexyl)phthalate	50000	110 J	83 J	120 J	120 J	9 U	61 J	9.7 U
Butylbenzylphthalate	50000	14 U	12 U	14 U	16 U	13 U	13 U	14 U
Chrysene	400	13 U	11 U	13 U	15 U	12 U	100 J	13 U
Dimethylphthalate	2000	10 U	8.4 U	9.9 U	11 U	9.4 U	9.3 U	10 U
Di-n-butylphthalate	8100	5.6 U	4.7 U	5.5 U	6.2 U	5.2 U	5.2 U	5.6 U
Fluoranthene	50000	5.8 U	4.9 U	5.8 U	6.5 U	5.5 U	190 J	5.9 U
Indeno(1,2,3-cd)pyrene	3200	10 U	8.5 U	10 U	11 U	9.5 U	9.5 U	10 U
Pentachlorophenol	1000	13 U	11 U	13 U	15 U	12 U	12 U	13 U
Phenanthrene	50000	9.4 U	7.8 U	9.3 U	84 J	8.8 U	88 J	9.5 U
Pyrene	50000	7.5 U	6.2 U	7.4 U	8.3 U	7 U	180 J	7.6 U
Total Confident Conc. SVOC	500000	110	83	120	994	0	886	0
Total TICs		1430	1030	7520	30030	1070	1120	1340

Notes

- Concentration exceeds corresponding NYSDEC TAGM Cleanup Objective

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D - Sample diluted

NR - Not analyzed

* - Duplicate sample collected from HJ-SB-10 (6-7)

** - Duplicate sample collected from HJ-SB-19 (0-2)

TABLE 5-1
SUMMARY OF SOIL SAMPLING RESULTS (VOCs and SVOCs)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID	NYSDEC	HJ-SB-12	HJ-SB-13	HJ-SB-14	HJ-SB-15	HJ-SB-16	HJ-SB-17
Sample Depth (feet)	TAGM 4046	11-12	7-8	10-11	10-11	6.5-7.5	10-11
Sampling Date	Soil Cleanup	07/13/04	07/14/04	07/14/04	07/14/04	07/14/04	07/14/04
Matrix	Objective	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units	ug/kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
VOCs							
Acetone	200	510 U	7.9 U	9.4 U	13 U	9.3 U	9.7 U
Benzene	60	17000	0.21 U	0.26 U	0.36 U	0.25 U	0.26 U
Carbon Disulfide	2700	60 U	0.11 U	0.13 U	29	0.13 U	0.13 U
Cyclohexane		810	0.32 U	0.39 U	0.54 U	0.38 U	0.4 U
Ethyl Benzene	5500	2400	0.26 U	0.32 U	0.44 U	0.31 U	0.32 U
Isopropylbenzene	2300	410 J	0.39 U	0.47 U	170	0.46 U	0.48 U
m/p-Xylenes	1200	8700	0.55 U	0.65 U	0.92 U	0.64 U	0.67 U
Methyl Acetate		2800	1.4 U	1.6 U	2.3 U	1.6 U	1.7 U
Methyl tert-butyl Ether	120	800	0.38 U	0.45 U	0.63 U	0.44 U	0.46 U
Methylene Chloride	100	96 U	1.4 JB	0.86 U	1.2 U	36 B	0.88 U
o-Xylene	600	57 U	0.46 U	0.55 U	0.77 U	0.54 U	0.56 U
Tetrachloroethene	1400	5300	0.68 U	0.8 U	1.1 U	0.79 U	0.82 U
Toluene	1500	2900	0.28 U	0.33 U	0.46 U	0.32 U	0.34 U
trans-1,2-Dichloroethene	300	79 U	0.39 U	0.47 U	0.66 U	0.46 U	0.48 U
Trichloroethene	700	100 U	0.34 U	0.41 U	0.57 U	0.4 U	0.42 U
Trichlorofluoromethane		89 U	2.6 U	3.1 U	4.4 U	3.1 U	3.2 U
Vinyl Chloride	200	41 U	0.25 U	0.3 U	0.42 U	0.29 U	0.31 U
Total Confident Conc. VOC	10000	41120	1.4	0	199	36	0
Total TICs		33160	0	0	6100	0	710
SVOCs							
2,4-Dimethylphenol		22 U	1900 U	22 U	32 U	22 U	23 U
2-Methylnaphthalene	36400	7 U	600 U	7.1 U	10 U	7.1 U	7.3 U
3+4-Methylphenols	900	19 U	1600 U	19 U	27 U	19 U	20 U
Acetophenone		21 U	1800 U	22 U	31 U	22 U	22 U
Anthracene	50000	9.7 U	830 U	9.9 U	14 U	9.9 U	10 U
Benzaldehyde		40 U	3400 U	40 U	58 U	40 U	42 U
Benzo(a)anthracene	224	6.1 U	520 U	6.2 U	8.9 U	6.2 U	6.4 U
Benzo(a)pyrene	61	7 U	600 U	7.1 U	10 U	7.1 U	7.3 U
Benzo(b)fluoranthene	1100	22 U	1800 U	22 U	31 U	22 U	23 U
Benzo(g,h,i)perylene	50000	18 U	1500 U	18 U	26 U	18 U	18 U
Benzo(k)fluoranthene	1100	14 U	1200 U	14 U	20 U	14 U	15 U
bis(2-Ethylhexyl)phthalate	50000	130 J	800 U	9.5 U	64 J	9.5 U	59 J
Butylbenzylphthalate	50000	14 U	1200 U	14 U	20 U	14 U	14 U
Chrysene	400	13 U	1100 U	13 U	19 U	13 U	13 U
Dimethylphthalate	2000	9.7 U	830 U	9.9 U	14 U	9.9 U	10 U
Di-n-butylphthalate	8100	5.4 U	460 U	5.5 U	7.8 U	5.5 U	5.7 U
Fluoranthene	50000	5.6 U	480 U	5.7 U	8.2 U	5.7 U	5.9 U
Indeno(1,2,3-cd)pyrene	3200	9.8 U	840 U	10 U	14 U	10 U	10 U
Pentachlorophenol	1000	13 U	1100 U	13 U	18 U	13 U	13 U
Phenanthrene	50000	9.1 U	780 U	9.2 U	13 U	9.2 U	9.5 U
Pyrene	50000	7.2 U	620 U	7.4 U	11 U	7.4 U	7.6 U
Total Confident Conc. SVOC	500000	130	0	0	128	0	118
Total TICs		7920	40900	2540	5980	2760	18200

Notes

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B - The analyte was found in the laboratory blank as well as the sample.

D - Sample diluted

NR - Not analyzed

* - Duplicate sample collected from HJ-SB-10 (6-7)

** - Duplicate sample collected from HJ-SB-19 (0-2)

TABLE 5-1
SUMMARY OF SOIL SAMPLING RESULTS (VOCs and SVOCs)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID	NYSDEC	HJ-SB-18	HJ-SB-18	HJ-SB-19	HJ-SB-19	HJ-SB-SX-3**	HJ-SB-20
Sample Depth (feet)	TAGM 4046	0-2	2-4	0-2	2-4	0-2	0-2
Sampling Date	Soil Cleanup	07/14/04	07/14/04	07/14/04	07/14/04	07/14/04	07/14/04
Matrix	Objective	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units	ug/kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
VOCs							
Acetone	200	8.2 U	8.2 U	7.8 U	7.8 U	7.8 U	7.9 U
Benzene	60	0.22 U	0.22 U	0.21 U	0.21 U	0.21 U	0.21 U
Carbon Disulfide	2700	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U
Cyclohexane		0.34 U	0.34 U	0.32 U	0.32 U	0.32 U	0.32 U
Ethyl Benzene	5500	0.27 U	0.27 U	0.26 U	0.26 U	0.26 U	0.26 U
Isopropylbenzene	2300	0.41 U	0.41 U	0.39 U	0.39 U	0.39 U	0.39 U
m/p-Xylenes	1200	0.56 U	0.56 U	0.54 U	0.54 U	0.54 U	0.54 U
Methyl Acetate		1.4 U	1.4 U	1.3 U	1.3 U	1.3 U	1.3 U
Methyl tert-butyl Ether	120	0.39 U	0.39 U	0.37 U	0.37 U	0.37 U	0.37 U
Methylene Chloride	100	4.4 JB	2.9 JB	4.9 JB	4.2 JB	2.8 JB	28 B
o-Xylene	600	0.47 U	0.47 U	0.45 U	0.45 U	0.45 U	0.45 U
Tetrachloroethene	1400	0.7 U	0.7 U	0.66 U	0.66 U	0.66 U	0.67 U
Toluene	1500	0.28 U	0.28 U	0.27 U	0.27 U	0.27 U	0.27 U
trans-1,2-Dichloroethene	300	0.41 U	0.41 U	0.39 U	0.39 U	0.39 U	0.39 U
Trichloroethene	700	0.35 U	0.35 U	0.33 U	0.33 U	0.33 U	0.34 U
Trichlorofluoromethane		2.7 U	2.7 U	2.6 U	2.6 U	2.6 U	2.6 U
Vinyl Chloride	200	0.26 U	0.26 U	0.24 U	0.24 U	0.24 U	0.25 U
Total Confident Conc. VOC	10000	4.4	2.9	4.9	4.2	2.8	28
Total TICs		0	6.1	0	0	0	0
SVOCs							
2,4-Dimethylphenol		20 U	20 U	18 U	18 U	19 U	19 U
2-Methylnaphthalene	36400	6.2 U	6.2 U	5.9 U	5.9 U	5.9 U	6 U
3+4-Methylphenols	900	17 U	17 U	16 U	16 U	16 U	16 U
Acetophenone		19 U	19 U	18 U	18 U	18 U	18 U
Anthracene	50000	8.6 U	8.6 U	8.2 U	8.2 U	8.2 U	8.2 U
Benzaldehyde		35 U	35 U	33 U	33 U	34 U	34 U
Benzo(a)anthracene	224	5.5 U	5.5 U	5.2 U	5.2 U	5.2 U	5.2 U
Benzo(a)pyrene	61	6.2 U	6.2 U	5.9 U	5.9 U	5.9 U	6 U
Benzo(b)fluoranthene	1100	19 U	19 U	18 U	18 U	18 U	18 U
Benzo(g,h,i)perylene	50000	16 U	16 U	15 U	15 U	15 U	15 U
Benzo(k)fluoranthene	1100	12 U	12 U	12 U	12 U	12 U	12 U
bis(2-Ethylhexyl)phthalate	50000	8.3 U	230 J	70 J	70 J	94 J	500
Butylbenzylphthalate	50000	12 U	12 U	11 U	11 U	12 U	12 U
Chrysene	400	11 U	11 U	11 U	11 U	11 U	11 U
Dimethylphthalate	2000	8.6 U	8.6 U	8.2 U	8.2 U	8.2 U	8.2 U
Di-n-butylphthalate	8100	4.8 U	4.8 U	4.5 U	4.5 U	4.6 U	4.6 U
Fluoranthene	50000	5 U	5 U	4.8 U	4.8 U	4.8 U	4.8 U
Indeno(1,2,3-cd)pyrene	3200	8.7 U	8.8 U	8.3 U	8.3 U	8.3 U	8.4 U
Pentachlorophenol	1000	11 U	11 U	11 U	11 U	11 U	11 U
Phenanthrene	50000	8.1 U	8.1 U	7.6 U	7.6 U	7.7 U	7.7 U
Pyrene	50000	6.4 U	6.5 U	6.1 U	6.1 U	6.1 U	6.2 U
Total Confident Conc. SVOC	500000	0	460	140	62	188	1000
Total TICs		2600	15580	2820	1150	4380	2580

Notes

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D - Sample diluted

NR - Not analyzed

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TABLE 5-1
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USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID	NYSDEC	HJ-SB-20	HJ-SB-21	HJ-SB-22	HJ-SB-22	HJ-SB-23	HJ-SB-24
Sample Depth (feet)	TAGM 4046	2-4	9-10	0-2	2-4	9-10	0-2
Sampling Date	Soil Cleanup	07/14/04	07/14/04	07/14/04	07/14/04	07/14/04	07/14/04
Matrix	Objective	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
VOCs							
Acetone	200	7.9 U	9 U	7.7 U	9.1 U	9.2 U	8.8 U
Benzene	60	0.21 U	0.24 U	0.21 U	0.25 U	0.25 U	0.24 U
Carbon Disulfide	2700	0.11 U	0.12 U	0.1 U	0.12 U	0.12 U	0.12 U
Cyclohexane		0.32 U	0.37 U	0.31 U	0.37 U	0.38 U	0.36 U
Ethyl Benzene	5500	0.26 U	0.3 U	0.26 U	0.3 U	0.31 U	0.29 U
Isopropylbenzene	2300	0.39 U	0.45 U	0.38 U	0.45 U	0.46 U	0.44 U
m/p-Xylenes	1200	0.55 U	0.62 U	0.53 U	0.63 U	0.63 U	0.6 U
Methyl Acetate		1.4 U	1.5 U	1.3 U	1.6 U	1.6 U	1.5 U
Methyl tert-butyl Ether	120	0.38 U	0.43 U	0.37 U	0.43 U	0.44 U	0.42 U
Methylene Chloride	100	1.2 JB	0.82 U	1.7 JB	3.5 JB	6.2 J	0.8 U
o-Xylene	600	0.46 U	0.52 U	0.45 U	0.53 U	0.53 U	0.51 U
Tetrachloroethene	1400	0.68 U	0.77 U	0.65 U	0.77 U	0.78 U	0.75 U
Toluene	1500	0.28 U	0.31 U	0.27 U	0.32 U	0.32 U	0.3 U
trans-1,2-Dichloroethene	300	0.39 U	0.45 U	0.38 U	0.45 U	0.46 U	0.44 U
Trichloroethene	700	0.34 U	0.39 U	0.33 U	0.39 U	0.4 U	0.38 U
Trichlorofluoromethane		2.6 U	3 U	2.5 U	3 U	3 U	2.9 U
Vinyl Chloride	200	0.25 U	0.28 U	0.24 U	0.29 U	0.29 U	0.28 U
Total Confident Conc. VOC	10000	1.2	0	1.7	3.5	6.2	0
Total TICs		0	0	0	0	0	0
SVOCs							
2,4-Dimethylphenol		19 U	21 U	18 U	22 U	22 U	210 U
2-Methylnaphthalene	36400	6 U	6.8 U	5.9 U	6.9 U	7 U	66 U
3+4-Methylphenols	900	16 U	18 U	16 U	18 U	19 U	180 U
Acetophenone		18 U	21 U	18 U	21 U	21 U	200 U
Anthracene	50000	8.3 U	9.5 U	8.1 U	9.5 U	9.7 U	92 U
Benzaldehyde		34 U	39 U	33 U	39 U	40 U	380 U
Benzo(a)anthracene	224	5.3 U	6 U	5.1 U	6 U	6.2 U	58 U
Benzo(a)pyrene	61	6 U	6.8 U	5.9 U	6.9 U	7 U	430 J
Benzo(b)fluoranthene	1100	19 U	21 U	18 U	21 U	22 U	200 U
Benzo(g,h,i)perylene	50000	15 U	17 U	15 U	17 U	18 U	170 U
Benzo(k)fluoranthene	1100	12 U	14 U	12 U	14 U	14 U	130 U
bis(2-Ethylhexyl)phthalate	50000	580	130 J	450	230 J	120 J	420 J
Butylbenzylphthalate	50000	12 U	13 U	11 U	13 U	14 U	130 U
Chrysene	400	11 U	13 U	11 U	13 U	13 U	120 U
Dimethylphthalate	2000	8.3 U	9.5 U	8.1 U	9.5 U	9.7 U	92 U
Di-n-butylphthalate	8100	4.6 U	5.3 U	4.5 U	5.3 U	5.4 U	5200
Fluoranthene	50000	4.8 U	5.5 U	4.7 U	5.6 U	5.7 U	430 J
Indeno(1,2,3-cd)pyrene	3200	8.4 U	9.6 U	8.2 U	9.7 U	9.8 U	93 U
Pentachlorophenol	1000	11 U	12 U	11 U	12 U	13 U	120 U
Phenanthrene	50000	7.8 U	8.9 U	7.6 U	8.9 U	9.1 U	86 J
Pyrene	50000	6.2 U	7.1 U	6.1 U	7.1 U	7.3 U	400 J
Total Confident Conc. SVOC	500000	1160	260	450	460	240	6880
Total TICs		2400	2180	1920	2720	1900	3680

Notes

- Concentration exceeds corresponding NYSDEC TAGM Cleanup Objective

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample.

D - Sample diluted

NR - Not analyzed

* - Duplicate sample collected from HJ-SB-10 (6-7)

** - Duplicate sample collected from HJ-SB-19 (0-2)

TABLE 5-1
SUMMARY OF SOIL SAMPLING RESULTS (VOCs and SVOCs)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID	NYSDEC	HJ-SB-24	HJ-SB-24	HJ-SS-1	HJ-SS-2	HJ-SS-3	HJ-SS-4
Sample Depth (feet)	TAGM 4046	2-4	6-7				
Sampling Date	Soil Cleanup	07/14/04	07/14/04	07/13/04	07/14/04	07/14/04	07/14/04
Matrix	Objective	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units	ug/kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
VOCs							
Acetone	200	11 U	9.6 U	NR	NR	NR	NR
Benzene	60	0.3 U	0.26 U	NR	NR	NR	NR
Carbon Disulfide	2700	0.15 U	6.1 J	NR	NR	NR	NR
Cyclohexane		0.46 U	0.39 U	NR	NR	NR	NR
Ethyl Benzene	5500	0.37 U	0.32 U	NR	NR	NR	NR
Isopropylbenzene	2300	0.55 U	5.3 J	NR	NR	NR	NR
m/p-Xylenes	1200	0.77 U	0.66 U	NR	NR	NR	NR
Methyl Acetate		1.9 U	1.6 U	NR	NR	NR	NR
Methyl tert-butyl Ether	120	0.53 U	0.46 U	NR	NR	NR	NR
Methylene Chloride	100	7.3 JB	9.6 B	NR	NR	NR	NR
o-Xylene	600	0.64 U	0.55 U	NR	NR	NR	NR
Tetrachloroethene	1400	3.8 J	0.81 U	NR	NR	NR	NR
Toluene	1500	0.39 U	0.33 U	NR	NR	NR	NR
trans-1,2-Dichloroethene	300	0.55 U	0.48 U	NR	NR	NR	NR
Trichloroethene	700	0.48 U	0.41 U	NR	NR	NR	NR
Trichlorofluoromethane		3.7 U	3.2 U	NR	NR	NR	NR
Vinyl Chloride	200	0.35 U	0.3 U	NR	NR	NR	NR
Total Confident Conc. VOC	10000	11.1	21	NR	NR	NR	NR
Total TICs		11	2940	NR	NR	NR	NR
SVOCs							
2,4-Dimethylphenol		1300 U	23 U	450 U	200 U	49 U	38 U
2-Methylnaphthalene	36400	420 U	7.2 U	140 U	64 U	15 U	12 U
3+4-Methylphenols	900	1100 U	19 U	380 U	170 U	41 U	32 U
Acetophenone		1300 U	22 U	440 U	190 U	47 U	37 U
Anthracene	50000	590 U	810	200 U	89 U	21 U	17 U
Benzaldehyde		2400 U	41 U	820 U	360 U	2500	68 U
Benzo(a)anthracene	224	370 U	53 J	130 U	390 J	380 J	130 J
Benzo(a)pyrene	61	420 U	7.2 U	140 U	530 J	540 J	120 J
Benzo(b)fluoranthene	1100	1300 U	22 U	440 U	650 J	730 J	150 J
Benzo(g,h,i)perylene	50000	1100 U	18 U	360 U	380 J	270 J	30 U
Benzo(k)fluoranthene	1100	840 U	14 U	280 U	520 J	470 J	190 J
bis(2-Ethylhexyl)phthalate	50000	570 U	82 J	1000 J	86 U	190 J	490 J
Butylbenzylphthalate	50000	830 U	14 U	280 U	120 U	30 U	23 U
Chrysene	400	780 U	76 J	260 U	560 J	560 J	170 J
Dimethylphthalate	2000	590 U	10 U	200 U	89 U	21 U	17 U
Di-n-butylphthalate	8100	330 U	5.6 U	110 U	50 U	120 J	73 J
Fluoranthene	50000	3200 J	230 J	120 U	420 J	500 J	250 J
Indeno(1,2,3-cd)pyrene	3200	600 U	10 U	200 U	90 U	210 J	17 U
Pentachlorophenol	1000	770 U	13 U	260 U	120 U	28 U	22 U
Phenanthrene	50000	3300 J	1500	190 U	83 U	140 J	91 J
Pyrene	50000	3100 J	340 J	150 U	430 J	480 J	240 J
Total Confident Conc. SVOC	500000	9600	4021	1000	3880	7090	1904
Total TICs		29300	20415	0	10590	13070	39690

Notes

- Concentration exceeds corresponding NYSDEC TAGM Cleanup Objective

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample.

D - Sample diluted

NR - Not analyzed

* - Duplicate sample collected from HJ-SB-10 (6-7)

** - Duplicate sample collected from HJ-SB-19 (0-2)

TABLE 5-1
SUMMARY OF SOIL SAMPLING RESULTS (VOCs and SVOCs)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID Sample Depth (feet) Sampling Date Matrix Units	NYSDEC TAGM 4046 Soil Cleanup Objective ug/kg	HJ-SS-05 07/16/04 SOIL ug/Kg	HJ-SS-06 07/16/04 SOIL ug/Kg	HJ-SS-07 07/16/04 SOIL ug/Kg	HJ-SS-08 07/16/04 SOIL ug/Kg
VOCs					
Acetone	200	NR	NR	NR	NR
Benzene	60	NR	NR	NR	NR
Carbon Disulfide	2700	NR	NR	NR	NR
Cyclohexane		NR	NR	NR	NR
Ethyl Benzene	5500	NR	NR	NR	NR
Isopropylbenzene	2300	NR	NR	NR	NR
m/p-Xylenes	1200	NR	NR	NR	NR
Methyl Acetate		NR	NR	NR	NR
Methyl tert-butyl Ether	120	NR	NR	NR	NR
Methylene Chloride	100	NR	NR	NR	NR
o-Xylene	600	NR	NR	NR	NR
Tetrachloroethene	1400	NR	NR	NR	NR
Toluene	1500	NR	NR	NR	NR
trans-1,2-Dichloroethene	300	NR	NR	NR	NR
Trichloroethene	700	NR	NR	NR	NR
Trichlorofluoromethane		NR	NR	NR	NR
Vinyl Chloride	200	NR	NR	NR	NR
Total Confident Conc. VOC	10000	NR	NR	NR	NR
Total TICs		NR	NR	NR	NR
SVOCs					
2,4-Dimethylphenol		22 U	25 U	22 U	240 U
2-Methylnaphthalene	36400	6.9 U	7.9 U	6.9 U	76 U
3+4-Methylphenols	900	18 U	21 U	18 U	200 U
Acetophenone		21 U	24 U	21 U	230 U
Anthracene	50000	9.6 U	11 U	9.5 U	110 U
Benzaldehyde		39 U	45 U	39 U	430 U
Benzo(a)anthracene	224	6.1 U	6.9 U	55 J	67 U
Benzo(a)pyrene	61	6.9 U	7.9 U	60 J	76 U
Benzo(b)fluoranthene	1100	21 U	24 U	70 J	240 U
Benzo(g,h,i)perylene	50000	17 U	20 U	48 J	190 U
Benzo(k)fluoranthene	1100	14 U	16 U	52 J	150 U
bis(2-Ethylhexyl)phthalate	50000	99 J	100 J	72 J	100 U
Butylbenzylphthalate	50000	13 U	15 U	13 U	7200
Chrysene	400	13 U	54 J	74 J	140 U
Dimethylphthalate	2000	9.6 U	11 U	9.5 U	110 U
Di-n-butylphthalate	8100	5.3 U	6.1 U	5.3 U	59 U
Fluoranthene	50000	59 J	84 J	130 J	62 U
Indeno(1,2,3-cd)pyrene	3200	9.7 U	11 U	45 J	110 U
Pentachlorophenol	1000	13 U	14 U	12 U	140 U
Phenanthrene	50000	9 U	110 J	44 J	99 U
Pyrene	50000	52 J	110 J	120 J	79 U
Total Confident Conc. SVOC	500000	210	458	770	7200
Total TICs		7900	8770	10200	7700

Notes

- Concentration exceeds corresponding NYSDEC TAGM Cleanup Objective

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample.

D - Sample diluted

NR - Not analyzed

* - Duplicate sample collected from HJ-SB-10 (6-7)

** - Duplicate sample collected from HJ-SB-19 (0-2)

TABLE 5-2
SUMMARY OF SOIL SAMPLING RESULTS (METALS)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID	NYSDEC	HJ-SB-01	HJ-SB-02	HJ-SB-03	HJ-SB-04	HJ-SB-04	HJ-SB-06	HJ-SB-06	HJ-SB-08
Sample Depth (feet)	TAGM 4046	8-9	3-4	4-5	0-2	7-8	0-2	6-7	0-2
Sampling Date	Soil Cleanup	07/13/04	07/13/04	07/13/04	07/13/04	07/13/04	07/13/04	07/13/04	07/13/04
Matrix	Objective	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METALS (Total)									
Arsenic	7.5 or SB	5.52	NR	NR	7.53	6.17	3.14	7.42	6.65
Barium	300 or SB	75.6	NR	NR	61.9	885	37.4	105	49.4
Cadmium	1 or SB	2.64	NR	NR	1.88	3.82	1.02	2.41	1.97
Chromium	10 or SB	14	NR	NR	11	13	7.09	22.7	13.5
Lead	SB	26.7	NR	NR	55.9	614	12.6	16.8	48
Mercury	0.1	0.03	NR	NR	0.12	0.11	0.02	0.03	0.04
Selenium	2 or SB	1.06 J	NR	NR	1.76	0.877 J	0.836 J	2.05	1.43
Silver	SB	3.28	NR	NR	2.81	0.228 J	0.109 U	0.472 J	0.214 J

Notes

- Concentration exceeds corresponding NYSDEC TAGM Cleanup Objective

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

NR - Not analyzed

* - Duplicate sample collected from HJ-SB-10 (6-7)

** - Duplicate sample collected from HJ-SB-19 (0-2)

TABLE 5-2
SUMMARY OF SOIL SAMPLING RESULTS (METALS)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID	NYSDEC	HJ-SB-08	HJ-SB-09	HJ-SB-10	HJ-SX-02*	HJ-SB-10	HJ-SB-12	HJ-SB-13	HJ-SB-14
Sample Depth (feet)	TAGM 4046	11-12	8-9	6-7	6-7	18-19	11-12	7-8	10-11
Sampling Date	Soil Cleanup	07/13/04	07/13/04	07/13/04	07/13/04	07/13/04	07/13/04	07/14/04	07/14/04
Matrix	Objective	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METALS (Total)									
Arsenic	7.5 or SB	4.07	7.2	3.32	3.98	17.2	4.04	4.09	13.6
Barium	300 or SB	97.5	139	53.1	56	180	60.9	43.9	177
Cadmium	1 or SB	2.24	1.3	1.49	1.48	1.98	1.47	0.457 J	0.766
Chromium	10 or SB	16.9	13	10.5	10.3	27	11	6.7	20.2
Lead	SB	15.1	478	11.9	32.6	1060	71.1	41.8	19.8
Mercury	0.1	0.03	0.44	0.02	0.29	0.3	0.55	0.04	0.19
Selenium	2 or SB	0.865 J	1.51	0.747 J	1.02 J	1.85	1.11 J	0.861 J	1.22 J
Silver	SB	0.13 U	0.15 U	0.124 U	0.125 U	0.616 J	0.13 U	0.111 U	1.07 J

Notes

- Concentration exceeds corresponding NYSDEC TAGI Cleanup Objective

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

NR - Not analyzed

* - Duplicate sample collected from HJ-SB-10 (6-7)

** - Duplicate sample collected from HJ-SB-19 (0-2)

TABLE 5-2
SUMMARY OF SOIL SAMPLING RESULTS (METALS)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID	NYSDEC	HJ-SB-15	HJ-SB-16	HJ-SB-17	HJ-SB-18	HJ-SB-18	HJ-SB-19	HJ-SB-19
Sample Depth (feet)	TAGM 4046	10-11	6.5-7.5	10-11	0-2	2-4	0-2	2-4
Sampling Date	Soil Cleanup	07/14/04	07/14/04	07/14/04	07/14/04	07/14/04	07/14/04	07/14/04
Matrix	Objective	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METALS (Total)								
Arsenic	7.5 or SB	6.52	5.76	17.9	6.25	6.13	7.28	1.55
Barium	300 or SB	140	87.8	79.7	56.8	48.6	64.8	13.5 J
Cadmium	1 or SB	0.294 J	0.492 J	0.458 J	0.353 J	0.317 J	0.414 J	0.087 J
Chromium	10 or SB	24.6	15.1	12.6	13.5	10.1	16.1	3.81
Lead	SB	17.6	13.3	27.7	13.4	12.3	17.2	11.1
Mercury	0.1	0.05	0.05	0.08	0.03	0.02	0.03	0.02
Selenium	2 or SB	2.56	0.743 J	0.854 J	0.343 U	0.865 J	0.53 J	0.812 J
Silver	SB	1.47 J	0.538 J	0.392 J	0.579 J	0.76 J	0.675 J	0.274 J

Notes

- Concentration exceeds corresponding NYSDEC TAGI Cleanup Objective

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

NR - Not analyzed

* - Duplicate sample collected from HJ-SB-10 (6-7)

** - Duplicate sample collected from HJ-SB-19 (0-2)

TABLE 5-2
SUMMARY OF SOIL SAMPLING RESULTS (METALS)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID	NYSDEC	HJ-SB-SX-3**	HJ-SB-20	HJ-SB-20	HJ-SB-21	HJ-SB-22	HJ-SB-22	HJ-SB-23
Sample Depth (feet)	TAGM 4046	0-2	0-2	2-4	9-10	0-2	2-4	9-10
Sampling Date	Soil Cleanup	07/14/04	07/14/04	07/14/04	07/14/04	07/14/04	07/14/04	07/14/04
Matrix	Objective	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METALS (Total)								
Arsenic	7.5 or SB	7.22	6.58	5.45	11.9	2.57	6.98	3.54
Barium	300 or SB	54.5	159	119	81.6	34.7	86.4	67.4
Cadmium	1 or SB	0.43 J	0.346 J	0.332 J	0.387 J	0.14 J	0.253 J	0.062 J
Chromium	10 or SB	14.2	15.5	11.9	13.9	7.11	15	11.5
Lead	SB	17.5	16.6	15.1	36.8	14.8	63.8	47.9
Mercury	0.1	0.05	0.04	0.05	0.25	0.03	0.1	0.59
Selenium	2 or SB	0.614 J	1.24	1.08	1 J	0.844 J	1.01 J	1.15 J
Silver	SB	0.381 J	0.676 J	0.65 J	0.769 J	0.489 J	0.819 J	0.27 J

Notes

- Concentration exceeds corresponding NYSDEC TAGI Cleanup Objective

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

NR - Not analyzed

* - Duplicate sample collected from HJ-SB-10 (6-7)

** - Duplicate sample collected from HJ-SB-19 (0-2)

TABLE 5-2
SUMMARY OF SOIL SAMPLING RESULTS (METALS)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID	NYSDEC	HJ-SB-24	HJ-SB-24	HJ-SB-24	HJ-SS-1	HJ-SS-2	HJ-SS-3	HJ-SS-4
Sample Depth (feet)	TAGM 4046	0-2	2-4	6-7				
Sampling Date	Soil Cleanup	07/14/04	07/14/04	07/14/04	07/13/04	07/14/04	07/14/04	07/14/04
Matrix	Objective	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METALS (Total)								
Arsenic	7.5 or SB	7.17	17	7.22	3.84	4.42	6.39	5.94
Barium	300 or SB	211	528	104	302	76.2	156	123
Cadmium	1 or SB	0.659	1.64	0.43 J	1.99	0.659	1	0.959
Chromium	10 or SB	15.3	26.8	18.8	17	13.3	16.2	20.3
Lead	SB	569	2920	13.5	808	131	384	421
Mercury	0.1	0.67	0.87	0.04	0.24	0.09	0.35	0.16
Selenium	2 or SB	1.63	3.56	1.29	1.36	0.821 J	1.49	1.13
Silver	SB	0.734 J	0.796 J	1.49	0.747 J	0.556 J	0.539 J	0.905 J

Notes

- Concentration exceeds corresponding NYSDEC TAGI Cleanup Objective

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

NR - Not analyzed

* - Duplicate sample collected from HJ-SB-10 (6-7)

** - Duplicate sample collected from HJ-SB-19 (0-2)

TABLE 5-2
SUMMARY OF SOIL SAMPLING RESULTS (METALS)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID	NYSDEC	HJ-SS-05	HJ-SS-06	HJ-SS-07	HJ-SS-08
Sample Depth (feet)	TAGM 4046				
Sampling Date	Soil Cleanup	07/16/04	07/16/04	07/16/04	07/16/04
Matrix	Objective	SOIL	SOIL	SOIL	SOIL
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
METALS (Total)					
Arsenic	7.5 or SB	6.3	7.14	2.9	9.76
Barium	300 or SB	62.3	70.3	48.6	332
Cadmium	1 or SB	0.43 J	0.376 J	0.228 J	3.33
Chromium	10 or SB	14.6	15.1	7.09	23.1
Lead	SB	26.9	34.8	80.5	1080
Mercury	0.1	0.03	0.04	0.19	0.96
Selenium	2 or SB	0.382 U	0.429 U	0.372 U	1.31 J
Silver	SB	1.54	0.304 J	0.259 J	1.03 J

Notes

- Concentration exceeds corresponding NYSDEC TAGI Cleanup Objective

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

NR - Not analyzed

* - Duplicate sample collected from HJ-SB-10 (6-7)

** - Duplicate sample collected from HJ-SB-19 (0-2)

TABLE 5-3
SUMMARY OF GROUNDWATER SAMPLING RESULTS (VOCs and SVOCs)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID Sampling Date Matrix Units	NYSDEC Class GA Standard ug/L	HJB-MW-1 08/05/04 WATER ug/L	HJB-MW-2 08/05/04 WATER ug/L	HJB-MW-3 08/05/04 WATER ug/L	HJB-MW-4 08/05/04 WATER ug/L	HJB-MW-5 08/05/04 WATER ug/L	HJB-MW-6 08/05/04 WATER ug/L	HJB-JW-1* 08/05/04 WATER ug/L
VOCs								
Acetone		3.3 U	18 J	25 J	1900 JD	3.3 U	3.3 U	3.3 U
cis-1,2-Dichloroethene	5	0.77 U	0.77 U	0.77 U	140 JD	0.77 U	0.77 U	0.77 U
Methyl tert-butyl Ether	10	82	0.36 U	0.36 U	36 UD	0.36 U	0.36 U	0.36 U
Methylene Chloride	5	0.62 U	0.62 U	3.5 J	62 UD	0.62 U	0.62 U	0.62 U
Tetrachloroethene	5	0.33 U	0.33 U	0.33 U	2500 D	0.33 U	0.33 U	0.33 U
Toluene	5	0.39 U	0.39 U	0.61 J	39 UD	0.39 U	0.39 U	0.39 U
Trichloroethene	5	0.67 U	0.67 U	0.67 U	130 JD	0.67 U	0.67 U	0.67 U
Total Confident Conc. VOC		164	36	58.22	9340	0	0	0
Total TICs		440	190	207.5	5900	440	410	520
SVOCs								
bis(2-Ethylhexyl)phthalate	50	2.7 JB	4.2 JB	2.7 JB	2.7 JB	1.7 JB	2.2 JB	1.7 JB
Di-n-butylphthalate	50	1.1 J	0.098 U	3.4 J	1.1 J	0.099 U	0.098 U	0.099 U
Total Confident Conc. SVOC		3.8	4.2	6.1	3.8	1.7	2.2	1.7
Total TICs		13.1	21.6	90.2	21	14.2	5.8	16.1

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

B - The analyte was found in the laboratory blank as well as the sample.

D - Sample diluted

* - Duplicate sample collected from HJB-MW-05

TABLE 5-4
SUMMARY OF GROUNDWATER SAMPLING RESULTS (METALS)
USEPA BROWNFIELDS ASSESMENT PILOT PROJECT
HENRY JOHNSON BOULEVARD PROPERTIES
ALBANY, NEW YORK

Sample ID Sampling Date Matrix Units	NYSDEC Class GA Standard ug/L	HJB-MW-1 08/05/04 WATER ug/L	HJB-MW-2 08/05/04 WATER ug/L	HJB-MW-3 08/05/04 WATER ug/L	HJB-MW-4 08/05/04 WATER ug/L	HJB-MW-5 08/05/04 WATER ug/L	HJB-MW-6 08/05/04 WATER ug/L	HJB-JW-1* 08/05/04 WATER ug/L
METALS (Total)								
Arsenic	25	5.27 J	4.84 U	4.84 U	28.9	4.98 J	4.84 U	4.84 U
Barium	1000	105 J	183 J	110 J	497	191 J	161 J	222
Cadmium	5	0.994 U	0.994 U	0.994 U	10.6	0.994 U	0.994 U	1.18 J
Chromium	50	17.4	7.08 J	3.72 J	84.2	4.72 J	8.3 J	11.4
Lead	25	10.1	59.6	11.3	279	20.3	10.7	31.6
Mercury	0.7	0.03 U	0.03 U	0.03 U	0.35	0.03 U	0.04 J	0.13 J
Selenium	10	5.24 U	5.24 U	5.24 U	5.24 U	5.24 U	6.72 J	7.9 J
Silver	50	3.38 U	3.38 U	3.38 U	3.38 U	3.38 U	3.38 U	3.38 U
METALS (Dissolved)								
Arsenic	25	4.84 U	4.84 U	4.84 U	4.84 U	4.84 U	4.84 U	4.84 U
Barium	1000	80 J	83.4 J	84.3 J	164 J	139 J	120 J	134 J
Cadmium	5	0.994 U	0.994 U	0.994 U	0.994 U	0.994 U	0.994 U	0.994 U
Chromium	50	1.22 U	1.22 U	1.22 U	2.84 J	1.22 U	1.22 U	1.22 U
Lead	25	1.79 U	1.79 U	1.79 U	1.79 U	1.79 U	1.79 U	1.79 U
Mercury	0.7	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Selenium	10	5.24 U	5.46 J	6.1 J	5.24 U	5.24 U	5.24 U	6.99 J
Silver	50	3.38 U	3.38 U	3.38 U	3.38 U	3.38 U	3.38 U	3.38 U

Notes

- Concentration exceeds corresponding NYSDEC Class GA Standard

U - The compound was not detected at the indicated concentration.

J - The concentration given is an approximate value.

* - Duplicate sample collected from HJB-MW-05

TAGM 4046 Cleanup Objectives. VOCs detected in sample SB-12 (11-12) included isopropylbenzene at a concentration of 410 ug/kg and benzene at a concentration of 17,000 ug/kg. Soil sample SB-09 (8-9) contained isopropylbenzene (5,200 ug/kg) and methyl tert-butyl ether (MTBE) (310,000 ug/kg) at concentrations that exceeded the corresponding NYSDEC TAGM 4046 Cleanup Objectives of 2,300 ug/kg and 120 ug/kg, respectively. Soil sample SB-10 (18-19) contained acetone (450 ug/kg) and benzene (100 ug/kg) at concentrations greater than the corresponding NYSDEC TAGM 4046 Cleanup Objectives of 200 ug/kg and 60 ug/kg, respectively. VOCs were not detected at concentrations that exceeded the corresponding NYSDEC TAGM 4046 Cleanup Objectives in any other soil samples collected during the investigation.

5.2.1.2 SVOCs

As shown in Table 5-1, surface soil samples SS-02 and SS-03 contained benzo(a)anthracene, benzo(a)pyrene, and chrysene at concentrations greater than the corresponding NYSDEC TAGM 4046 Cleanup Objectives. Surface soil sample SS-04 contained benzo(a)pyrene at a concentration of 120 ug/kg, which exceeded the corresponding NYSDEC TAGM 4046 Cleanup Objective of 61 ug/kg. Soil sample SB-04 (7-8) contained dimethylphthalate (2,500 ug/kg) at a concentration greater than the corresponding NYSDEC TAGM 4046 Cleanup Objective of 2,000 ug/kg. Soil sample SB-24 (0-2) contained benzo(a)pyrene at a concentration of 430 ug/kg, which exceeded the corresponding NYSDEC TAGM 4046 Cleanup Objective of 61 ug/kg. SVOCs were not detected at concentrations that exceeded the corresponding NYSDEC TAGM 4046 Cleanup Objectives in any other soil samples collected during the investigation.

5.2.1.3 Metals

Table 5-2 shows that 32 of 39 soil samples collected during the site investigation contained chromium at concentrations greater than the corresponding NYSDEC TAGM 4046 Cleanup Objective of 10 mg/kg. Chromium concentrations in these samples ranged from 11 mg/kg to 27 mg/kg. Since chromium concentrations were similar in soil samples collected across the site, the concentrations likely indicate background conditions

which can range from 1.5 mg/kg to 40 mg/kg in New York State (NYSDEC TAGM 4046). Fifteen of the 39 soil samples collected during the investigation contained mercury at concentrations greater than the corresponding NYSDEC TAGM 4046 Cleanup Objective of 0.1 mg/kg. Mercury concentrations in those samples ranged from 0.11 mg/kg in sample SB-04 (7-8) to 0.96 mg/kg in sample SS-08. Mercury concentrations detected in the soil samples are shown on Figure 5-2. Lead was detected at concentrations greater than 100 mg/kg in ten soil samples collected during the site investigation. Figure 5-3 shows the locations of those samples. Six soil samples contained lead at concentrations greater than 500 mg/kg. The locations of those samples are also shown on Figure 5-3. No other metals were detected at concentrations greater than the corresponding NYSDEC TAGM 4046 Cleanup Objectives in the soil samples collected during the site investigation.

5.2.2 Groundwater

Analytical results for groundwater samples collected at the site during the Phase II ESA are summarized in Table 5-3 and Table 5-4 and shown on Figure 5-4. The applicable NYSDEC Class GA standards for groundwater are also listed in Tables 5-3 and 5-4 for comparison.

5.2.2.1 VOCs

As shown in Table 5-3, the groundwater sample collected from monitoring well MW-04 contained trichloroethene (130 micrograms per liter(ug/l)), PCE (2,500 ug/l), and cis-1,2-dichloroethene (140 ug/l) at concentrations that exceeded the corresponding NYSDEC Class GA Standards of 5 ug/l. The groundwater sample collected from MW-01 contained MTBE, a common gasoline additive, at a concentration of 82 ug/l, which exceeded the corresponding NYSDEC Class GA Standard of 10 ug/l. VOCs were not detected at concentrations greater than the corresponding NYSDEC Class GA Standards in any other groundwater samples collected during the investigation.

5.2.2.2 SVOCs

As shown in Table 5-3, SVOCs were not detected at concentrations greater than the corresponding NYSDEC Class GA Standards in any of the groundwater samples collected during the site investigation.

5.2.2.3 Metals

As shown in Table 5-4, the unfiltered groundwater sample collected from monitoring well MW-04 contained arsenic (28.9 ug/l), cadmium (10.6 ug/l), chromium (84.2 ug/l) and lead (279 ug/l) at concentrations that exceeded the corresponding NYSDEC Class GA Standards. Lead was also detected in the unfiltered groundwater sample from MW-02 at a concentration of 59.6 ug/l, which exceeded the corresponding NYSDEC Class GA Standard of 25 ug/l. Monitoring wells MW-01, MW-03, MW-05, and MW-06 did not contain any metals at concentrations greater than the corresponding NYSDEC Class GA Standards.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

Based on field observations made during the Phase II site investigation and the analytical results for samples collected from the site, petroleum compounds are present in the subsurface soil and groundwater in the vicinity of the former vehicle maintenance and refueling facility at 132 HJB. Soil samples collected in this area contained several VOCs at concentrations greater than the corresponding NYSDEC TAGM Cleanup Objectives. One groundwater sample contained MTBE, a common gasoline additive, at a concentration greater than the corresponding NYSDEC Class GA Standard.

Based on field observations and analytical data, chlorinated solvents are present in the soil and groundwater in the vicinity of the former building foundation at 124 HJB in the southwest portion of the site. Soil and groundwater samples collected from this area contained several VOCs at concentrations greater than the corresponding NYSDEC Standards. Potential sources for these VOCs include degreasing operations and underground storage tanks (USTs).

Chromium, mercury, and lead were the RCRA-listed metals that were most frequently detected at elevated concentrations. Chromium concentrations were generally consistent across the site and likely represent site background conditions. Several soil samples contained mercury at concentrations that exceeded the NYSDEC TAGM 4046 Cleanup Objective. Lead was detected at concentrations greater than 500 ug/kg in several soil samples collected during the site investigation. Groundwater in the vicinity of the former vehicle maintenance and refueling facility contained lead at a concentration greater than the NYSDEC Standard. Groundwater in the vicinity of the former building foundation contained several metals at concentrations greater than the corresponding NYSDEC Class GA Standards.

6.2 RECOMMENDATIONS

Based on the results of the Phase II ESA, the following actions are recommended at the Henry Johnson Boulevard Properties.

1. **Former Vehicle Maintenance and Refueling Area (132 HJB):** Additional subsurface investigation should be conducted on the Henry Johnson Boulevard properties in the vicinity of the former vehicle maintenance and refueling area to further evaluate the extent of the petroleum compounds observed in the Phase II soil borings drilled in the area. Groundwater monitoring wells should also be installed to assess groundwater quality and hydraulic properties in the area. Given that groundwater recovery rates are relatively low in this area, conventional groundwater monitoring wells installed using hollow-stem auger drilling methods should be used to evaluate the potential presence of petroleum compounds in the groundwater.

2. **Former Building Foundation Area (124 HJB):** Additional subsurface investigations should be conducted in the former building foundation area to evaluate the nature and extent of chlorinated solvents in the subsurface soil and groundwater. Given that groundwater recovery rates are relatively low, conventional groundwater monitoring wells installed using hollow-stem auger drilling methods should be used to evaluate the potential presence of chlorinated compounds in the groundwater in these areas. The goal of the additional subsurface investigations should be the delineation of soil and groundwater containing chlorinated solvents.

The main contaminates of concern in the affected areas of the site are VOCs and RCRA-listed metals.

7.0 REFERENCES

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APPENDIX A

Soil Boring Logs

MALCOLM PIRNIE	TEST BORING LOG	BORING No. SB-01/MW-4

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York		SHEET	1 OF 1
CLIENT	Albany Community Development Agency				PROJECT No.	4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA				GROUND ELEV.	
WELL MATERIAL					DATUM	Assumed
DRILLING METHOD(S)			SAMPLE	CORE / CASING	DATE STARTED	7/13/04
DRILL RIG TYPE	Geoprobe	TYPE			DATE FINISHED	7/13/04
GROUND WATER DEPTH	7.0'	DIA.	"		DRILLER	Zebra
MEASURING POINT		WEIGHT	#		PIRNIE STAFF	K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	3.5		0.0		Light brown; fine-medium sand; moderately compact; dry.		1.0 / 2.5	
4					Top 0.75' - Same As Above (SAA). Bottom 0.75' - Red brick material; medium-coarse sand; becomes wet at 7.0' below ground surface (bgs).	4.0		
6	1.5		782					▼ Strong chlorinated solvent odors.
8					Top 0.5' - SAA; wet. Bottom 3.5' - Grey; clay; very compact; wet.	8.0		Strong chlorinated solvent odors; staining; sheen on water. Sample collected - 8-9' bgs.
10	4.0		>9999					
12						12.0	13.0	

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-02
PROJECT Henry Johnson Boulevard	LOCATION Albany, New York	SHEET 1 OF 1
CLIENT Albany Community Development Agency		PROJECT No. 4279001
DRILLING CONTRACTOR		MEAS. PT. ELEV.
PURPOSE PHASE II ESA		GROUND ELEV.
WELL MATERIAL		DATUM Assumed
DRILLING METHOD(S)	SAMPLE / CORE / CASING	DATE STARTED 7/13/04
DRILL RIG TYPE Geoprobe	TYPE	DATE FINISHED 7/13/04
GROUND WATER DEPTH 4.0'	DIA. "	DRILLER Zebra
MEASURING POINT	WEIGHT #	PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT	FALL "	

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. / DEPTH	WELL Constr.	REMARKS
2	3.5		0.0		Top 0.5' - Dark brown; coarse sand; subrounded gravel up to 0.25"; some organics and chared wood fragments; dry. Bottom 3.5' - Brown; fine sand and silt; dry.			Sample collected - 3-4' bgs. ▼
4					Brown-gray; clay; compact; moist.	3.5		
6	4		0.0		Brown-gray; clay; wet.	4.0		
8						8.0		

MALCOLM PIRNIE

TEST BORING LOG

BORING No. HJ-SB-03

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York	SHEET	1 OF 1
CLIENT	Albany Community Development Agency			PROJECT No.	4279001
DRILLING CONTRACTOR				MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA			GROUND ELEV.	
WELL MATERIAL				DATUM	Assumed
DRILLING METHOD(S)		SAMPLE	CORE / CASING	DATE STARTED	7/13/04
DRILL RIG TYPE	Geoprobe	TYPE		DATE FINISHED	7/13/04
GROUND WATER DEPTH	4.5'	DIA.	"	DRILLER	Zebra
MEASURING POINT		WEIGHT	#	PIRNIE STAFF	K. Stahle
DATE OF MEASUREMENT		FALL	"		

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	3		0.0		Brown; medium sand; some silt; some organics; moderately compact; dry. Red brick material at 2.0'-2.5'.			
					Gray; fine sand and silt; compact; dry.	2.5		
4	4		0.0		Gray; clay; compact; wet.	4.0		▼Sample collected - 4-5' bgs.
6								
8						8.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-04

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York		SHEET	1 OF 1
CLIENT	Albany Community Development Agency				PROJECT No.	4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA				GROUND ELEV.	
WELL MATERIAL					DATUM	Assumed
DRILLING METHOD(S)			SAMPLE	CORE / CASING	DATE STARTED	7/13/04
DRILL RIG TYPE	Geoprobe	TYPE			DATE FINISHED	7/13/04
GROUND WATER DEPTH	7.0'	DIA.	"		DRILLER	Zebra
MEASURING POINT		WEIGHT	#		PIRNIE STAFF	K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	1.5		0.0		Brown; fine-medium sand; some red brick and wood fragments; dry.			Sample collected - 0-2' bgs.
4	1.5		0.0		Brown; medium-coarse sand; abundant red brick and wood fragments; some copper wire at 1.0'; dry.	4.0		
6					Gray; silty clay; compact; wet.	6.8		▼ Sample collected - 7-8' bgs.
8						8.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-05
PROJECT Henry Johnson Boulevard	LOCATION Albany, New York	SHEET 1 OF 1
CLIENT Albany Community Development Agency		PROJECT No. 4279001
DRILLING CONTRACTOR		MEAS. PT. ELEV.
PURPOSE PHASE II ESA		GROUND ELEV.
WELL MATERIAL		DATUM Assumed
DRILLING METHOD(S)	SAMPLE / CORE / CASING	DATE STARTED 7/13/04
DRILL RIG TYPE Geoprobe	TYPE	DATE FINISHED 7/13/04
GROUND WATER DEPTH 6.0'	DIA. "	DRILLER Zebra
MEASURING POINT	WEIGHT #	PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT	FALL "	

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	2		0.0		Brown; medium sand; some red brick material at 1.5'; dry.			
4	2.5		0.0		Red; brick fragments and wood chips; loose; dry.	4.0		▼
6					Gray; clay; compact; wet.	6.5		
8						8.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-06

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York		SHEET	1 OF 1
CLIENT	Albany Community Development Agency				PROJECT No.	4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA				GROUND ELEV.	
WELL MATERIAL					DATUM	Assumed
DRILLING METHOD(S)			SAMPLE	CORE / CASING	DATE STARTED	7/13/04
DRILL RIG TYPE	Geoprobe	TYPE			DATE FINISHED	7/13/04
GROUND WATER DEPTH	7.0'	DIA.	"		DRILLER	Zebra
MEASURING POINT		WEIGHT	#		PIRNIE STAFF	K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. / DEPTH	WELL Constr.	REMARKS
2	3.5		0.0		Brown-gray; fine sand and silt; trace clay; moderately compact; dry.			Sample collected - 0-2' bgs.
4					Brown; fine sand and silt; some clay; compact; wet at 7.0' bgs.	4.0		
6	3		0.0					Sample collected - 6-7' bgs. ▼
8						8.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-07

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York		SHEET	1 OF 1
CLIENT	Albany Community Development Agency				PROJECT No.	4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA				GROUND ELEV.	
WELL MATERIAL					DATUM	Assumed
DRILLING METHOD(S)			SAMPLE	CORE / CASING	DATE STARTED	7/13/04
DRILL RIG TYPE	Geoprobe	TYPE			DATE FINISHED	7/13/04
GROUND WATER DEPTH	8.0'	DIA.	"		DRILLER	Zebra
MEASURING POINT		WEIGHT	#		PIRNIE STAFF	K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. / DEPTH	WELL Constr.	REMARKS
2	2.5		0.0		Light brown-brown; medium sand; loose; dry. Brown; coarse sand; asphalt and concrete fragments; some gravel up to 0.5"; loose; dry.	1.5		
4	2.0		0.0		Top 1.0' - Brown; wood chips; concrete fragments; drywall fragments; some fabric; dry. Bottom 1.0' - Brown; medium sand; concrete fragments; some gravel up to 0.5"; dry Moist at 7.9'.	4.0		
8								▼
10	3.0		0.0		Brown; fine sand and silt; trace clay; compact; wet.	8.0		
12						12.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-08

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York		SHEET	1 OF 1
CLIENT	Albany Community Development Agency				PROJECT No.	4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA				GROUND ELEV.	
WELL MATERIAL					DATUM	Assumed
DRILLING METHOD(S)			SAMPLE	CORE / CASING	DATE STARTED	7/13/04
DRILL RIG TYPE	Geoprobe	TYPE			DATE FINISHED	7/13/04
GROUND WATER DEPTH	6.0'	DIA.	"		DRILLER	Zebra
MEASURING POINT		WEIGHT	#		PIRNIE STAFF	K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. / DEPTH	WELL Constr.	REMARKS
2	3		0.0		Brown; medium-coarse sand; angular shale fragments up to 1.0"; loose; dry.			
4					Brown; medium-coarse sand; subrounded gravel up to 0.75"; loose; dry. Wet at 6.0' bgs.	4.0		
6	3		0.0		Brown; fine sand; silt; trace clay; wet.	6.0		▼
8					Brown; SAA; wet.	8.0		Petroleum odors and staining.
10	2		581					Sample collected 11-12' bgs.
12					Brown; SAA; wet.	12.0		
14	3.5		0.0					
16						16.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-09
PROJECT Henry Johnson Boulevard	LOCATION Albany, New York	SHEET 1 OF 1
CLIENT Albany Community Development Agency		PROJECT No. 4279001
DRILLING CONTRACTOR		MEAS. PT. ELEV.
PURPOSE PHASE II ESA		GROUND ELEV.
WELL MATERIAL		DATUM Assumed
DRILLING METHOD(S)	SAMPLE / CORE / CASING	DATE STARTED 7/13/04
DRILL RIG TYPE Geoprobe	TYPE	DATE FINISHED 7/13/04
GROUND WATER DEPTH 7.0'	DIA. "	DRILLER Zebra
MEASURING POINT	WEIGHT #	PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT	FALL "	

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	3.5		0.0		Brown; medium sand; subrounded gravel up to 0.5"; moderately compact; dry.			
4					SAA; moist.	4.0		
6	3		1929		Dark gray; fine sand, silt, and clay; wet at 7.0' bgs.	6.0		Strong petoleum odors and staining. ▼
8					Dark gray; coarse sand and gravel up to 0.25"; loose; wet.	8.0		Strong petoleum odors and staining. Sample collected 8-9' bgs.
10	3		2280		Brown/ gray; clay; compact; wet.	10.5		
12					Brown/ gray; clay; compact; wet.	12.0		
14	3.7		0.0					
16						16.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-10

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York		SHEET	1 OF 2
CLIENT	Albany Community Development Agency				PROJECT No.	4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA				GROUND ELEV.	
WELL MATERIAL					DATUM	Assumed
DRILLING METHOD(S)			SAMPLE	CORE / CASING	DATE STARTED	7/13/04
DRILL RIG TYPE	Geoprobe	TYPE			DATE FINISHED	7/13/04
GROUND WATER DEPTH	7.0'	DIA.	"		DRILLER	Zebra
MEASURING POINT		WEIGHT	#		PIRNIE STAFF	K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	3		0		Brown; fine-coarse sand; concrete, brick, and coal fragments; loose; dry.			
4					Brown; fine sand and silt; some clay; red brick and glass fragments; compact; wet at 7' bgs.	4.0		▼
6	2.5		0					
8					Gray; silt and clay; some gravel; glass and brick fragments; wet.	8.0		
10	1.5		0					
12					Brown; coarse sand and gravel; some fine sand; abundant brick fragments; wet.	12.0		Petroleum staining and slight petroleum odors.
14	3.5		0					
16					Brown; SAA; abundant brick fragments; wet.	16.0		
18	3.0		0					Petroleum odors and staining. Sample collected 18-19' bgs.

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-10
PROJECT Henry Johnson Boulevard	LOCATION Albany, New York	SHEET 2 OF 2
CLIENT Albany Community Development Agency		PROJECT No. 4279001

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
					Gray/brown; silt and clay; samoe brick fragments; wet.	20.0		
22	3		0					
24					Gray/brown; silt and clay; compact; wet.	24.0		
26	3		0					
28						28.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-11
PROJECT Henry Johnson Boulevard	LOCATION Albany, New York	SHEET 1 OF 1
CLIENT Albany Community Development Agency		PROJECT No. 4279001
DRILLING CONTRACTOR		MEAS. PT. ELEV.
PURPOSE PHASE II ESA		GROUND ELEV.
WELL MATERIAL		DATUM Assumed
DRILLING METHOD(S)	SAMPLE / CORE / CASING	DATE STARTED 7/13/04
DRILL RIG TYPE Geoprobe	TYPE	DATE FINISHED 7/13/04
GROUND WATER DEPTH 9.0'	DIA. "	DRILLER Zebra
MEASURING POINT	WEIGHT #	PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT	FALL "	

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	3.5		0		Brown; fine-medium sand; subrounded-subangular gravel up to 1"; trace silt; loose; dry.			
4					Brown; SAA; dry.	4.0		
6	2		0		Brown; fine sand and silt; trace clay; some brick and coal fragments; moist at 7.0' bgs.	5.0		Slight petroleum odors
8					Gray; silt and clay; same coal fragments; compact; wet at 9' bgs.	8.0		
10	2.3		450					Some petroleum odors and staining. Sample collected 9-10' bgs.
12					Gray/brown; clay; compact; wet.	12.0		
14	3..0		4.5					
16						16.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-12
PROJECT Henry Johnson Boulevard	LOCATION Albany, New York	SHEET 1 OF 1
CLIENT Albany Community Development Agency		PROJECT No. 4279001
DRILLING CONTRACTOR		MEAS. PT. ELEV.
PURPOSE PHASE II ESA		GROUND ELEV.
WELL MATERIAL		DATUM Assumed
DRILLING METHOD(S)	SAMPLE / CORE / CASING	DATE STARTED 7/13/04
DRILL RIG TYPE Geoprobe	TYPE	DATE FINISHED 7/13/04
GROUND WATER DEPTH 8.0'	DIA. "	DRILLER Zebra
MEASURING POINT	WEIGHT #	PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT	FALL "	

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	1.5		0		Brown; fine-medium sand; some angular gravel; loose; dry.			
4					NO RECOVERY	4.0		
6								
8					Brown/gray; fine sand, silt, and clay; some glass and brick fragments; moderately compact; wet.	8.0		▼
10	3.0		0.5					Some petroleum odors and staining. Sample collected 11-12' bgs.
12					Brown/gray; silt and clay; some brick fragments; large brick fragment at 15' bgs; compact; wet.	12.0		
14	3.0		0					
16						16.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. SB-13/MW-1

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York		SHEET	1 OF 1
CLIENT	Albany Community Development Agency				PROJECT No.	4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA				GROUND ELEV.	
WELL MATERIAL					DATUM	Assumed
DRILLING METHOD(S)			SAMPLE	CORE / CASING	DATE STARTED	7/14/04
DRILL RIG TYPE	Geoprobe	TYPE			DATE FINISHED	7/14/04
GROUND WATER DEPTH	8.0'	DIA.	"		DRILLER	Zebra
MEASURING POINT		WEIGHT	#		PIRNIE STAFF	K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	3		0		Brown; fine-medium sand; subangular gravel up to 0.5"; some concrete fragments; loose; dry.		1.0 / 3.0	
4					Brown; fine-medium sand; trace gravel; loose; moist.	4.0		
6	3.7		0					
8					Brown/gray; clay; compact; wet at 8' bgs.	8.0		Sample collected 7-8' bgs. ▼
10	3.8		0					
12					Brown/gray; clay; compact; wet.	12.0		
14	2		0				14.0	
16						16.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-14
PROJECT Henry Johnson Boulevard	LOCATION Albany, New York	SHEET 1 OF 2
CLIENT Albany Community Development Agency		PROJECT No. 4279001
DRILLING CONTRACTOR		MEAS. PT. ELEV.
PURPOSE PHASE II ESA		GROUND ELEV.
WELL MATERIAL		DATUM Assumed
DRILLING METHOD(S)	SAMPLE / CORE / CASING	DATE STARTED 7/14/04
DRILL RIG TYPE Geoprobe	TYPE	DATE FINISHED 7/14/04
GROUND WATER DEPTH 11.0'	DIA. "	DRILLER Zebra
MEASURING POINT	WEIGHT #	PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT	FALL "	

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	3		0		Brown; fine-medium sand; subrounded-angular gravel up to 1"; loose; dry.			
4					Brown; SAA; loose; dry.	4.0		
6	3		0		Dark brown; sand and silt; abundant brick and coal fragments; cohesive; moist.	5.0		
8					Brown; sand and silt; some brick and coal fragments; cohesive; wet at 11' bgs.	8.0		
10	3		0					Sample collected 10-11' bgs.
					Brown; silt and clay; compact; wet.	11.0		
12					Brown; silt and clay; compact; wet.	12.0		
14	3		0					
16					Brown; silt and clay; compact; wet.	16.0		
18	1.5		0					

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-14
PROJECT Henry Johnson Boulevard	LOCATION Albany, New York	SHEET 2 OF 2
CLIENT Albany Community Development Agency		PROJECT No. 4279001

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. / DEPTH	WELL Constr.	REMARKS
						20.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. SB-15/MW-3

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York		SHEET	1 OF 1
CLIENT	Albany Community Development Agency				PROJECT No.	4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA				GROUND ELEV.	
WELL MATERIAL					DATUM	Assumed
DRILLING METHOD(S)			SAMPLE	CORE / CASING	DATE STARTED	7/14/04
DRILL RIG TYPE	Geoprobe	TYPE			DATE FINISHED	7/14/04
GROUND WATER DEPTH	7.9'	DIA.	"		DRILLER	Zebra
MEASURING POINT		WEIGHT	#		PIRNIE STAFF	K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	3.5		10		Brown; medium sand; little gravel up to 0.25"; some red brick fragments; loose; dry.			2.0
4								4.0
6	2.5		0		Brown; silt and clay; large brick fragment at 7.5' bgs; compact; wet at 7.9' bgs.	4.0		
8					Gray; silt and clay; compact; wet.	8.0		▼ Some petroleum odors and staining.
10	1.0		102					Sample collected 10-11' bgs.
12					Gray; silt and clay; compact; wet.	12.0		Slight petroleum odors and staining.
14	3.8		10					15.0
16						16.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-16
PROJECT Henry Johnson Boulevard	LOCATION Albany, New York	SHEET 1 OF 1
CLIENT Albany Community Development Agency		PROJECT No. 4279001
DRILLING CONTRACTOR		MEAS. PT. ELEV.
PURPOSE PHASE II ESA		GROUND ELEV.
WELL MATERIAL		DATUM Assumed
DRILLING METHOD(S)	SAMPLE / CORE / CASING	DATE STARTED 7/14/04
DRILL RIG TYPE Geoprobe	TYPE	DATE FINISHED 7/14/04
GROUND WATER DEPTH 7.5'	DIA. "	DRILLER Zebra
MEASURING POINT	WEIGHT #	PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT	FALL "	

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	4.0		0		Brown; fine sand; trace silt and gravel up to 0.2"; moderately compact; dry.			
4	4.0		0		Brown; fine sand; silt and clay; compact; becomes wet at 7.5' bgs.	4.0		Sample collected 6.5-7.5' bgs. ▼
8	3.5		0		Brown; fine sand; silt and clay; compact; wet.	8.0		
10					Brown/gray; clay; mottled; compact; wet.	9.0		
12						12.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. SB-17/MW-2

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York		SHEET	1 OF 1
CLIENT	Albany Community Development Agency				PROJECT No.	4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA				GROUND ELEV.	
WELL MATERIAL					DATUM	Assumed
DRILLING METHOD(S)			SAMPLE	CORE / CASING	DATE STARTED	7/14/04
DRILL RIG TYPE	Geoprobe	TYPE			DATE FINISHED	7/14/04
GROUND WATER DEPTH	6.5'	DIA.	"		DRILLER	Zebra
MEASURING POINT		WEIGHT	#		PIRNIE STAFF	K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. / DEPTH	WELL Constr.	REMARKS
2	2		0		Brown; fine-medium sand; subrounded gravel up to 0.75"; loose; moist.		1.0 / 3.0	
4					Brown; fine sand, silt, and clay; some red brick fragments; cohesive; becomes wet at 6.5' bgs.	4.0		
6	3.8		0				▼	
8					Brown/gray; fine sand, silt, and clay; little red brick fragments; cohesive; wet.	8.0		
10	3.5		3.5					Sample collected 10-11' bgs. Slight petroleum odors and staining.
12	1		0		Gray; fine sand, silt, and clay; compact; wet.	12.0		
14						14.0	14.0	

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-18
PROJECT Henry Johnson Boulevard	LOCATION Albany, New York	SHEET 1 OF 1
CLIENT Albany Community Development Agency		PROJECT No. 4279001
DRILLING CONTRACTOR		MEAS. PT. ELEV.
PURPOSE PHASE II ESA		GROUND ELEV.
WELL MATERIAL		DATUM Assumed
DRILLING METHOD(S)	SAMPLE / CORE / CASING	DATE STARTED 7/14/04
DRILL RIG TYPE Geoprobe	TYPE	DATE FINISHED 7/14/04
GROUND WATER DEPTH 8.5'	DIA. "	DRILLER Zebra
MEASURING POINT	WEIGHT #	PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT	FALL "	

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	4		0		Light brown; fine sand; some subrounded gravel up to 0.5"; some silt; moderately compact; dry.			Sample collected 0-2' bgs.
								Sample collected 2-4' bgs.
4								
6	3.5		4.0		Light brown; fine sand; some subrounded gravel up to 0.5"; some silt; moderately compact; dry.	4.0		
8					Light brown; fine sand; some subrounded gravel up to 0.5"; some silt; compact; wet at 8.5' bgs.	8.0		▼
10	4		0		Brown; silt and clay; compact; wet.	9.0		
12						12.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-19
PROJECT Henry Johnson Boulevard	LOCATION Albany, New York	SHEET 1 OF 1
CLIENT Albany Community Development Agency		PROJECT No. 4279001
DRILLING CONTRACTOR		MEAS. PT. ELEV.
PURPOSE PHASE II ESA		GROUND ELEV.
WELL MATERIAL		DATUM Assumed
DRILLING METHOD(S)	SAMPLE / CORE / CASING	DATE STARTED 7/14/04
DRILL RIG TYPE Geoprobe	TYPE	DATE FINISHED 7/14/04
GROUND WATER DEPTH 7.0'	DIA. "	DRILLER Zebra
MEASURING POINT	WEIGHT #	PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT	FALL "	

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. / DEPTH	WELL Constr.	REMARKS
2	3.8		2.0		Light brown; fine sand; subrounded gravel; some brick debris; loose; dry.			Sample collected 0-2' bgs. Duplicate collected SX-3 (0-2). Sample collected 2-4' bgs.
4					Brown; fine-medium sand; subrounded gravel; some coal, glass, brick, and wood debris; wet at 7.0' bgs.	4.0		
6	1.8		0					▼
8						8.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-20
PROJECT Henry Johnson Boulevard	LOCATION Albany, New York	SHEET 1 OF 1
CLIENT Albany Community Development Agency		PROJECT No. 4279001
DRILLING CONTRACTOR		MEAS. PT. ELEV.
PURPOSE PHASE II ESA		GROUND ELEV.
WELL MATERIAL		DATUM Assumed
DRILLING METHOD(S)	SAMPLE / CORE / CASING	DATE STARTED 7/14/04
DRILL RIG TYPE Geoprobe	TYPE	DATE FINISHED 7/14/04
GROUND WATER DEPTH 7.0'	DIA. "	DRILLER Zebra
MEASURING POINT	WEIGHT #	PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT	FALL "	

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	3		3.0		Brown; fine-medium sand; abundant subrounded gravel up to 0.75"; loose; dry.			Sample collected 0-2' bgs.
								Sample collected 2-4' bgs.
4					Brown; fine-medium sand; abundant subrounded gravel up to 0.75"; loose; dry.	4.0		
6	2.5		0.0		Brown/gray; fine sand; some silt; some brick fragments; compact; wet at 7.0' bgs.	5.0		▼
8					Gray; silt and clay; little fine sand; compact; wet.	8.0		
10	3.2		0.0					
12						12.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. SB-21/MW-5

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York			SHEET 1 OF 1
CLIENT	Albany Community Development Agency					PROJECT No. 4279001
DRILLING CONTRACTOR						MEAS. PT. ELEV.
PURPOSE	PHASE II ESA					GROUND ELEV.
WELL MATERIAL						DATUM Assumed
DRILLING METHOD(S)			SAMPLE	CORE	CASING	DATE STARTED 7/14/04
DRILL RIG TYPE	Geoprobe	TYPE				DATE FINISHED 7/14/04
GROUND WATER DEPTH	10.0'	DIA.	"			DRILLER Zebra
MEASURING POINT		WEIGHT	#			PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
					Brown; fine-medium sand; subrounded gravel up to 0.25"; loose; dry.			
2	4		0		Light brown; fine sand and silt; trace gravel; compact; dry.	1.5		2.0
4								4.0
					Light brown; fine sand and silt; trace gravel; compact; dry.	4.0		
					Brown/gray; silt and clay; trace fine sand; compact; moist at 7.0' bgs.	5.0		
6	4		0					
8					Brown/gray; silt and clay; trace fine sand; compact; wet at 10' bgs.	8.0		
10	3.5		0					Sample collected 9-10' bgs.
					Gray; clay; compact; wet.	11.0		
12					Gray; clay; trace silt; compact; wet.	12.0		
14	4		0					15.0
16						16.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-22

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York		SHEET	1 OF 1
CLIENT	Albany Community Development Agency				PROJECT No.	4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA				GROUND ELEV.	
WELL MATERIAL					DATUM	Assumed
DRILLING METHOD(S)			SAMPLE	CORE / CASING	DATE STARTED	7/14/04
DRILL RIG TYPE	Geoprobe	TYPE			DATE FINISHED	7/14/04
GROUND WATER DEPTH	6.0'	DIA.	"		DRILLER	Zebra
MEASURING POINT		WEIGHT	#		PIRNIE STAFF	K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. / DEPTH	WELL Constr.	REMARKS
2	3.2		0		Brown; fine-medium sand and gravel; some brick fragments and organic debris; loose; dry.			Sample collected 0-2' bgs.
					Brown; fine sand and silt; compact; moist.	2.0		Sample collected 2-4' bgs.
4								
					Brown; fine sand and silt; trace clay; compact; wet at 6.0' bgs.	4.0		
6	3.0		0					▼
8						8.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. SB-23/MW-6

PROJECT Henry Johnson Boulevard	LOCATION Albany, New York				SHEET 1 OF 1
CLIENT Albany Community Development Agency					PROJECT No. 4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.
PURPOSE PHASE II ESA					GROUND ELEV.
WELL MATERIAL					DATUM Assumed
DRILLING METHOD(S)		SAMPLE	CORE	CASING	DATE STARTED 7/14/04
DRILL RIG TYPE Geoprobe	TYPE				DATE FINISHED 7/14/04
GROUND WATER DEPTH 10.0'	DIA.	"			DRILLER Zebra
MEASURING POINT	WEIGHT	#			PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT	FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	3.5		0		Brown; fine sand; some silt; some gravel up to 0.5"; compact; dry.		2.0	
4							4.0	
					Brown; fine sand; some silt; some gravel up to 0.5"; compact; dry.	4.0		
6	4		0		Brown/gray; silt and clay; trace brick fragments; compact; moist.	6.0		
8					Brown/gray; silt and clay; trace brick fragments; compact; wet at 10' bgs.	8.0		
10	4		0					Sample collected 9-10' bgs.
					Brown/gray; mottled clay; compact; wet.	11.0		
12					Brown/gray; mottled clay; compact; wet.	12.0		
14	4		0		Brown; medium sand; loose; wet.	14.0		
					Brown/gray; mottled clay; compact; wet.	15.0		
16							16.0	
						16.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-24

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York		SHEET	1 OF 1
CLIENT	Albany Community Development Agency				PROJECT No.	4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA				GROUND ELEV.	
WELL MATERIAL					DATUM	Assumed
DRILLING METHOD(S)			SAMPLE	CORE / CASING	DATE STARTED	7/14/04
DRILL RIG TYPE	Geoprobe	TYPE			DATE FINISHED	7/14/04
GROUND WATER DEPTH	10.0'	DIA.	"		DRILLER	Zebra
MEASURING POINT		WEIGHT	#		PIRNIE STAFF	K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	1.5		0		Brown; fine sand; some gravel; some brick and wood debris; loose; moist.			Sample collected 0-2' bgs.
4					Brown; fine sand; some silt; some gravel; some brick and concrete fragments; compact; moist.	4.0		Sample collected 2-4' bgs. Collect MS/MSD.
6	3		99		Brown/gray; silt and clay; trace fine sand; compact; moist.	6.0		Sample collected 6-7' bgs. Petroleum odors and staining.
8					Brown/gray; silt and clay; compact; wet at 10' bgs.	8.0		
10	3.5		3					▼ Slight petroleum odors and staining.
12					Brown/gray; silt and clay; compact; wet.	12.0		
14	3		0					
16						16.0		

MALCOLM PIRNIE	TEST BORING LOG	BORING No. HJ-SB-25

PROJECT	Henry Johnson Boulevard	LOCATION	Albany, New York		SHEET	1 OF 1
CLIENT	Albany Community Development Agency				PROJECT No.	4279001
DRILLING CONTRACTOR					MEAS. PT. ELEV.	
PURPOSE	PHASE II ESA				GROUND ELEV.	
WELL MATERIAL					DATUM	Assumed
DRILLING METHOD(S)			SAMPLE	CORE	CASING	DATE STARTED 7/14/04
DRILL RIG TYPE	Geoprobe	TYPE				DATE FINISHED 7/14/04
GROUND WATER DEPTH	9.5'	DIA.	"			DRILLER Zebra
MEASURING POINT		WEIGHT	#			PIRNIE STAFF K. Stahle
DATE OF MEASUREMENT		FALL	"			

DEPTH FT.	SAMPLE TYPE, RECOVERY, NUMBER	BLOWS ON SAMPLE SPOON PER 6"	PID	GRAPHIC LOG	GEOLOGIC DESCRIPTION KEY - Color, Major, Minor Moisture, Etc.	ELEV. DEPTH	WELL Constr.	REMARKS
2	4		0		Brown; fine-medium sand; subrounded gravel up to 0.5"; loose; dry.			
4								
	4		0		Brown; silty sand; compact; dry.	4.0		
6								
8					Brown; silty sand; compact; dry.	8.0		
	4		0		Gray; silt and clay; compact; some brick and class fragments in tip of core; wet at 9.5' bgs.	9.0		▼
10								
12						12.0		

APPENDIX B

Data Validation Report

Please note that the following Data Validation Report contains reference to samples collected from two different sites. Soil boring and groundwater samples with the prefix AH are from the Arbor Hill Gateway Properties site. Samples with the prefix HJ are from the Henry Johnson Boulevard Properties site.

Samples related to this site will contain the prefix HJ

Data Validation Services

120 Cobble Creek Road P. O. Box 208
North Creek, N. Y. 12853
Phone 518-251-4429
Facsimile 518-251-4428

December 14, 2004

Keith Stahle
Malcolm Pirnie, Inc.
43 British American Blvd.
Latham, NY 12110

RE: Validation of the City of Albany Brownsfield site data packages
Chemtech SDG Nos. S3546, S3567, S3602, S3654, S3675, S3965, and S4002

Dear Mr. Stahle :

Review has been completed for the data packages generated by Severn Trent Laboratories that pertain to samples collected 7/12/04 through 8/05/04 at the City of Albany Brownsfield site. Fifty-one soil and fifteen aqueous samples (including field duplicates) were processed for TCL volatiles, TCL semivolatiles, and RCRA metals. One of the soils was also processed for TCL PCBs, and nine of the aqueous samples were also processed for filtered (dissolved) RCRA metals. Eleven additional soil samples were analyzed for TCL semivolatiles and RCRA metals. Two additional soil samples were analyzed for TCL volatiles. Methodologies utilized are those of the USEPA SW846 methods 8260B and 8270C.

Data validation was performed with guidance from the USEPA Region 2 validation SOPs and the requirements of the specific methodologies. The following items were reviewed:

* Data Completeness
* Laboratory Case Narrative
* Custody Documentation
* Holding Times
* Surrogate Recoveries
* Matrix Spike Recoveries/Duplicate Correlations
* Field Duplicate Correlations
* Preparation/Calibration Blanks
* Control Spike/Laboratory Control Samples
* Calibration/CRI/CRA Standards
* ICP Interference Check Samples
* ICP Serial Dilutions
* Instrument IDLs
* Method Compliance
* Sample Result Verification

Those items showing deficiencies are discussed in the following sections of this report. All others were found to be acceptable as outlined in the above-mentioned validation procedures, and as applicable for the methodology. Unless noted specifically in the following text, reported results for the validated samples are substantiated by the raw data, and generated in compliance with protocol requirements.

In summary, sample processing was primarily conducted with compliance to protocol requirements and with adherence to quality criteria. Most results are usable as reported, usable with minor qualification as estimated in value, or with edit of trace level detections to nondetection. The exceptions are the following:

- results for three semivolatile compounds in one sample are not usable, and that the reported identifications of the Tentatively Identified Compounds are generally not accurate.
- results for the volatiles in two samples and the PCBs in one sample are revised due to reporting errors

These issues are discussed in the following narrative.

Copies of the laboratory case narratives, and the laboratory sample ID summaries are attached to this report, and should be reviewed in conjunction with this text. Also provided are copies of sample results forms reflecting final results with qualifications/edits applied in red ink.

General

HJ-SS-05 was reported as HJ-55-05.

In most cases, Tentatively Identified Compounds (TICs) were not properly identified by the laboratory in accordance with protocol requirements. The initial software match was reported, with disregard for the quality of the spectral fit. Instances were observed where surrogate standards, internal standards, target analytes within the same fraction, etc. were reported as TICs. In addition, many of the quantitated values of the TICs are biased significantly low because internal standards with large interferences in total response were used in the determinations (in some cases the surrogates coeluted with the internal standards and therefore all associated TIC values are about twice too low). Correction would require re-review (per protocol specifics) of all reported TICs by the laboratory (including revisions to the report forms) and subsequent validation of those results.

Field Duplicates

Blind field duplicate correlations were evaluation for volatile, semivolatile analytes, and metals in samples AH-SB-03(3-4), HJ-SB-10(6-7), HJ-SB-19(0-2), and AH-MW-4. All were within USEPA Region II validation guidelines, with the exception of the following:

- The results for naphthalene and 2-methylnaphthalene in AH-SB-03(3-4) vary greatly (detections below 500 ppb in the parent, and detections greater than 18,000 ppb in the duplicate). Results for these two compounds in the sample and its duplicate are qualified as estimated, and should be used with caution. A non-homogeneous sample matrix is suspected. Selenium also show variance (no detection at 0.4 ppm and detection at 1.2 ppm), and the results for that element in the sample and duplicate are also qualified as estimated.

- Tetrachloroethene and mercury show significant variances (>+-2XCRDL) in HJ-SB-10(6-7). The results for those analytes in the parent sample and duplicate are qualified as estimated.
- Cyclohexane and methylcyclohexane show variance in AH-MW-4 (factors of about six), and those results are therefore similarly qualified estimated.

Field/Trip Blanks

Field and trip blanks show no contamination above CRDL. However, due to presence of very low levels in those blanks, detected results for the following analytes are considered contamination in the indicated field samples, and have been edited to reflect nondetection at either the originally reported sample concentration, or the CRDL, whichever is greater:

- Methylene chloride in samples collected 7/15/04 through 7/19/04
- Bis-2(ethylhexyl)phthalate in samples collected from 7/15/04 through 8/5/04 except AH-SUMP
- Mercury in AH-SB-01(0.5-1.5), AH-SB-02(0.5-4.5), AH-SB-02(4.5-5.5), AH-SB-03(0.5-1.5), AH-SB-04(11-12), AH-SB-08(2-4), HJ-SB-01(8-9), HJ-SB-06(0-2), HJ-SB-06(6-7), HJ-SB-08(0-2), HJ-SB-08(11-12), and HJ-SB-10(6-7)
- Selenium detections in all collected 7/13/04 except HJ-SB-02(3-4), and HJ-SB-03(4-5)
- Cadmium in AH-SB-11(6-7), AH-SB-12(5-6), HJ-SS-05, HJ-SS-06, HJ-SS-07
- Selenium in AH-SB-11(6-7), AH-SB12(5-6), HJ-SS-08

One sample and a field blank were entered onto the custody forms at sample receipt. The custody with samples collected 7/14/04 does not reflect the time of release. These issues are not likely to affect the integrity of the sample results.

Volatile Analyses by EPA 8260B

Sample report forms show both MDL values and "RL" or "RDL" values for reporting limits. In compliance with the protocol, the "RL/RDL" values should be used as reporting limits for undetected analytes.

The results for trichloroethene and methylcyclohexane in HJ-SB-01(8-9) have been revised by the laboratory upon request resubmission communications). The very high response for the former was not initially reported, and was mistaken as a detection of the latter.

The results for HJ-SB-10(6-7) have been revised by the laboratory upon request (see attached resubmission communications). They were not initially corrected for moisture content.

Several of the samples consistently exhibited outlying low internal and surrogate standard responses that indicate a suppressing matrix effect on target analyte recoveries. Therefore all volatile results for the following samples are considered estimated ("J" or "UJ" qualifiers). Unless noted otherwise, the initial analysis result is preferable:

- HJ-SB-15(10-11), HJ-SB-17(10-11), HJ-SB-24(2-4), AH-SB-10(13-14), and AH-SB-06(8-9). The reporting limits for HJ-SB-15(10-11) and HJ-SB-17(10-11) are of borderline usability due to those low responses, and should be used with caution.

- The undiluted analysis of HJ-SB-01(8-9) is not usable for non-detected compounds due to the matrix resulting in lack of recovery for the internal standards. The dilution analysis should be used for all compounds except for those detected only in the original analysis. Initial detected values that are used are qualified estimated in value.
- The results all compounds except 1,1,2,2-tetrachloroethane, isopropylbenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, bromoform, and 1,2-dibromo-3-chloropropane are qualified as estimated due to low responses for associated internal standards in AH-SB-14(6-7) (use –RE).
- Results for HJ-SX-02(6-7) are qualified as estimated, with a possible low bias, due to slightly low surrogate d4-1,2-dichloroethane recovery (use -RE).

The analytical column used in instruments K, D, and H show bad tailing, and needed replacement. This resulted in the necessity for manual intervention in the integration of compounds in standards, and can result in loss of sensitivity due to spreading response over a prolonged elution range. This added to lost responses for the internal standards in some cases noted above. In addition, the short analysis time (hastened GC column heat cycle) that was used did not allow for adequate resolution for some compounds.

Detected results for AH-SX-1(3-4)-Dup that are utilized from the undiluted analysis are qualified as estimated due to elevated BFB surrogate recovery.

Detected results for AH-SB-12(5-6) are qualified as estimated due to elevated BFB surrogate recovery.

Low level detected results for methylcyclohexane and methyl acetate in HJ-SB-12(11-12) and of methyl-t-butyl ether in AH-SB-14(6-7) are edited to nondetection at the CRDL due to poor spectral quality.

The detection of isopropylbenzene in HJ-SB-24(6-7) is qualified as tentative in identification and estimated in value ("NJ") due to poor spectral quality.

Due to presence in associated method blanks, the detections of the following compounds are considered contamination, and are edited to nondetection in the indicated associated samples:

- Methylene chloride flagged as "B" in samples in SDG S3602
- Acetone in AH-DZ-1

Results for analytes initially reported with the "E" qualifier are to be derived from the dilution analyses of those samples.

Results for toluene, m,p-xylene, and o-xylene in AH-MW-3 (they are derived from the dilution analysis) are qualified as estimated, possibly biased high, because that analysis followed the undiluted analysis, wherein those compounds produced high concentration responses with a potential for carryover.

Calibration standards meet validation guidelines, with the following exceptions, the results for which are qualified as estimated ("J" or "UJ") in the indicated samples:

- Due to the poor column performance, specifically in the associated low 5 ppb initial calibration standard, reporting limits for dichlorodifluoromethane, bromomethane, chloroethane, trichlorofluoromethane, methyl acetate, and 2-butanone in HJ-SB-04(0-2), HJ-SB-SB-09(8-9), HJ-SB-SB-12(11-2), and HJ-SB-01(8-9) are to be edited to reflect 4 times the original limit and qualified as estimated.
- Due to the very poor column performance, specifically in the associated low 5 ppb initial calibration standard, reporting limits for bromomethane, chloroethane, vinyl chloride, chloromethane, dichloro-difluoromethane, and carbon disulfide in are edited to reflect 4 times the original limit in samples processed by medium level in SDG S3654 and those processed on instrument H in SDG S3675.
- Carbon disulfide (44%RSD) in AH-SB-02(4.5-5.5)
- Dichlorodifluoromethane (44%D) and chloromethane (26%D) in AH-SB-01(0.5-1.5), AH-SB-04(0.5-1.5)
- 1,4-dichlorobenzene (27%D), 1,2,4-trichlorobenzene (33%D), and tetrachloroethene (40%D) in AH-SB-01(4-5)
- Tetrachloroethene in HJ-SB-04(0-2), HJ-SB-SB-09(8-9), HJ-SB-SB-12(11-2), and HJ-SB-01(8-9)
- 1,4-dichlorobenzene (26%D) in HJ-SB-14(10-11), HJ-SB-16(6.5-7.5), HJ-SB-17(10-11), HJ-SB-18(2-4), HJ-SB-SX-3(0-2), HJ-SB-20(0-2), HJ-SB-20(2-4), HJ-SB-22(2-4), HJ-SB-24(2-4), and HJ-SB-24(6-7)
- cyclohexane (30%D) in samples reported in SDG S3654
- tetrachloroethene (27%D) in Maintenance Pit and AH-MW-01
- 1,4-dichlorobenzene (27%D), bromomethane (35%D), and trichloroethene (28%D) in AH-SB-11(6-7), AH-SB-10(13-14)
- methylene chloride (46 %RSD and 39%D) in AH-SB-13(7-8) and AH-SB-14(6-7)
- methylcyclohexane (48%RSD), chloromethane (28%D), acetone (28%D), methyl acetate (44%D), tetrachloroethene (38%D), and 1,2-dibromo-3-chloropropane (27%D) in samples collected 8/04/04.
- Chloroethane (28%D), carbon disulfide (48%RSD and 63%D), methylene chloride (35%D), trans-1,2-dichloroethene (34%D), and bromoform (33%RSD) in HJB-MW-4
- Chloroethane (29%D), carbon disulfide (48%RSD and 61%D), methyl acetate (39%D), tetrachloroethene (41%D), and bromoform in all samples collected 8/05/04 except HJB-MW-4

Matrix spike/matrix spike duplicate evaluations were performed on low level soils AH-SB-09(2-4), HJJ-SX-02(6-7), HJ-SB-24(2-4), on medium level soil HJ-SB-09(8-9), and on aqueous samples SUMP, AH-MW-2, and HJB-MW-6. Most accuracy and precision values were within recommended ranges. The exceptions are as follows; sample results are not affected:

- Trichloroethene and toluene showed low recoveries in one of the matrix spikes of HJ-SB-24(2-4), but not the other.
- All recoveries were low in the matrix spike of SUMP. This is evidently a laboratory processing/spiking error, as indicated by the fact that the surrogate d8-toluene recovered at 88%, but the spike compound d0-toluene recovered at only 48%. The recoveries in the matrix spike

duplicate were acceptable.

- Trichloroethene shows slightly low recoveries in the matrix spikes of AH-MW-2 (74% and 78%, below 79%).

Please see the earlier discussion regarding characterization of the TICs. TICs that are flagged by the laboratory with the "B" flag are considered external contamination, and are to be rejected as sample components. TICs reported with a CAS number should also have been flagged as "N" to indicate a tentative identification.

Some of the TICs are used from the dilution analyses due to interferences in the internal standard responses in the initial analyses.

Reporting limits for aqueous samples can be lowered from 5 ug/L to 1 ug/L, reflecting the lowest concentration calibration standard.

Some of the soil samples were processed only at dilutions in order to bring the responses for target analytes into linear range. This produced high reporting limits for those analytes not detected in the samples.

Reporting limits for the ketones in HJ-SB-01(8-9) were tenfold too low due to truncated field on the report form.

Summary Forms 5A for soil processing do not reflect the heated purge.

Semivolatile Analyses by EPA 8270C

Sample report forms show both MDL values and "RL" of "RDL" values for reporting limits. In compliance with the protocol, the "RL/RDL" values should be used as reporting limits for undetected analytes.

Samples AH-SB-02(4.5-5.5) and AH-SX-1(3-4) show initial low recoveries below 10% for on acid surrogate, but were acceptable in the dilution analysis (with the dilution of interferences). Results for the phenolic compounds in those samples are to be derived only from the dilution analyses.

The result for acetophenone in the undiluted analysis of AH-SX-1(3-4) is edited to reflect nondetection at the CRDL. The "detection" was incorrectly reported.

Results for analytes initially reported with the "E" qualifier are to be derived from the dilution analyses of those samples.

Due to low level detection in the associated method blank, all detections of bis(2-ethylhexyl)-phthalate reported in samples reported in SDGs S3546, S3965, and S4002 are considered external contamination, and edited to reflect nondetection ("U") at the RL. Other detections of this compound should be regarded with caution.

Matrix spike/matrix spike duplicate evaluations were performed on AH-SB-01(0.5-1.5), HJ-SB-09(8-9), HJ-SB-24-(2-4), AH-SB-10(13-14), SUMP, AH-MW-2, and HJB-MW-6.

Accuracy and precision were values within recommended ranges, or showed only one outlying recoveries or a slightly elevated duplicate correlations for analytes not detected in the parent sample, with the following exceptions (results for which are qualified as estimated in the parent sample):

- Benzo(a)anthracene show two elevated recoveries and indeno(1,2,3-cd)pyrene showed one low and one high recovery in AH-SB-01(0.5-1.5).
- Indeno(1,2,3-cd)pyrene produced two low recoveries for HJ-SB-09(8-9)
- Hexachlorocyclopentadiene showed two low recoveries in AH-SB-10(13-14)
- Hexachlorocyclopentadiene, 2,4-dinitrophenol, and 4,6-dinitro-2-methylphenol failed to recover in the spikes of SUMP. Therefore, results for those three compounds in that parent samples are not usable, and are rejected. Results for 3,3'-dichlorobenzidine and bis(2-ethylhexyl)phthalate in the same sample are qualified estimated in that sample, as they recovered below the lower acceptance limits in those spikes.

Matrix spikes of HJ-SB-24(2-4) were diluted beyond proper evaluation.

Due to elevated recovery in the associated spiked blank (LCS), the detected results for benzo(a)anthracene (110%, above 105%) in the samples collected 7/13/04 are qualified as estimated, with a possible high bias.

Reporting limits for hexachlorocyclopentadiene in AH-SB-08(2-4) and its associated FB, and in the soil samples collected 7/13/04 are edited upward to reflect two and one half times the originally reported limits due to poor response factor in the associated low concentration calibration standard and qualified as estimated.

Calibration standards meet validation guidelines, with the following exceptions, the results for which are qualified as estimated ("J" or "UJ") in the indicated samples:

- bis(2-chloroethyl)ether (32%D to 35%D) in HJ-SB-08(0-2), HJ-SB-06(6-7), HJ-SB-08(11-12), HJ-SX-02(6-7), HJ-SB-01(8-9), HJ-SB-04(7-8), HJ-SB-09(8-9), HJ-SB-04(0-2), HJ-SS-1, and samples collected 7/14/04, 7/15/04, 7/16/04, and 7/19/04
- indeno(1,2,3-cd)pyrene (39%D) in HJ-SB-22(0-2)
- hexachlorocyclopentadiene (56%D) in samples collected 7/14/04, 7/15/04, and 7/16/04
- n-nitroso-di-n-propylamine (43%D and 86%D) in the samples collected 8/04/04
- 4-bromophenylphenyl ether (28%D) in HJB-MW-6, HJB-JW-1, HJB-MW-5, FB-1

Some of the soil samples were processed only at dilutions (higher extract volumes). Although in some cases it was justified by sample matrix, there are cases where the reason is not apparent and not addressed in the laboratory case narrative. This produced high reporting limits for those analytes not detected in the samples.

Please see the earlier discussion regarding characterization of the TICs. TICs that are flagged by the laboratory with the "B" or "A" flag are considered external contamination, and are to be rejected as sample components. TICs reported with a CAS number should also have been flagged as "N" to indicate a tentative identification.

Volatile target analytes that are reported as semivolatile TICs are rejected from consideration as TICs. Some of the TICs in HJ-SB-01(8-9) were not evaluated/reported.

Surrogate recoveries reported on Forms 2 for some of the samples collected 7/14/04 do not reflect the correct dilution factor, and are in fact acceptable.

TCL PCB Analyses by EPA 8082

Sample report forms show both MDL values and "RL" of "RDL" values for reporting limits. In compliance with the protocol, the "RL/RDL" values should be used as reporting limits for undetected analytes.

Results for Aroclor 1260 in AH-SUMP have been revised to reflect detection (see resubmission communications), and qualified as tentative in identification and estimated in value ("NJ") due to interferences from the chlordane in the sample.

Matrix spikes of SUMP show acceptable recoveries and correlations for Aroclor 1260. The recoveries for Aroclor 1016 were reported as being high, but that was based on the higher of the two column analyses, reflecting interference. Accuracy and precision were acceptable with the lower values.

Matrix spike blank recoveries were acceptable.

Surrogate recoveries were within validation action guidelines, and blanks show no contamination. Aroclor 1660 calibration standards produced compliant responses.

Rescaled sample chromatograms were provided on request to allow for independent verification of the non-detected reported results.

RCRA Metals by 6010B and 7470/7471

The following matrix spikes and duplicate correlations were outside the acceptance range, resulting in qualification of those specific elements in the samples reported in the associated delivery group as estimated:

Sample ID	Element	Recoveries	Affected Samples
AH-SB-09(0-2)	barium	71% and 71%	SDG S3546
	Silver	27 and 27	
HJ-SB-09(8-9)	lead	-51 and –53	SDG S3567
	Mercury	134 and 144	

Sample ID	Element	Recoveries	Affected Samples
HJ-SB-24(2-4)	barium	44 and 47	first 20 samples in
	Mercury	50 and 102	SDG 3602
	Silver	21 and 20	
AH-SUMP	arsenic	74 and 73	last two samples in
	Barium	59 and 60	SDG 3602, all soils
	Cadmium	73 and 74	in SDGs S3654 and
	Chromium	-45 and –45	S3675, and the two
	Mercury	6 and 77	soils in SDG S3965
	Silver	470 and 470	

Matrix spikes of aqueous samples AH-MW-2-Total and HJB-MW-4-Filt. Show acceptable recoveries. Duplicate evaluations are within validation guidelines.

The ICP serial dilution evaluations of AH-SB-09(0-2), HJ-SB-24(2-4), AH-MW-2, HJB-MW-2-Filt, and HJB-MW-1-Filt are acceptable.

The ICP serial dilution evaluation of HJ-SB-09(8-9) shows outlying correlation for arsenic. The result for that element in the samples reported in SDG S3567 are qualified as estimated.

Due to low recovery (55%) in the associated low concentration CRI standard, results for mercury in samples reported in SDG S3546 are qualified as estimated.

Mercury recovered at only 5% in the CRI standard of 7/18/04. All associated results (SDG S35667) show detection, and are qualified as estimated.

Due to high recovery (180%) in the associated low concentration CRI standard, detected results for mercury in samples reported in SDG S3602 are considered additionally estimated.

Total and filtered fraction values correlate well.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,

Judy Harry

APPENDIX C

Analytical Laboratory Reporting Forms

Please note that the following Analytical Laboratory Reporting Forms contain data for samples collected from two different sites. Soil boring and groundwater samples with the prefix AH are from the Arbor Hill Gateway Properties site. Samples with the prefix HJ are from the Henry Johnson Boulevard Properties site.

Samples related to this site will contain the prefix HJ